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AN

ILLUSTRATED WEEKLY JOURNAL

OF

HORTICULTURE IN ALL ITS BRANCHES.

FOUNDED BY

W. Robinson, Author of the "English Flower Garden."

"You see, sweet maid, we marry
A gentler scion to the wildest stock;
And make conceive a bark of baser kind
By bud of nobler race: This is an art
Which does mend Nature,—change it rather: but
The art itself is nature."

Shakespeare.

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LONDON:

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TO

GEORGE NICHOLSON, A.L.S.

(Curator of the Royal Gardens, Kew)

FOR HIS WORK AMONG TREES AND SHRUBS,

THE FORTY-EIGHTH VOLUME OF "THE GARDEN"

Is dedicated,

W. R., January, 1896.



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The GARDEN.

VOL. XLVIII.

ORCHIDS.

CATTLEYA SUPERBA.

There is no doubt this beautiful Orchid richly deserves its name, being perfectly distinct and making a welcome change from the better-known species of the labiata group. The pseudo-bulbs are nearly erect, from 8 inches to 10 inches in height, furrowed and bronzy in appearance. Each bears a pair of similarly coloured leaves about 4 inches long and thick and leathery in texture. The spikes are produced from between these upon the current year's growth, and each bears usually from two to six flowers; the sepals and petals deep rosy purple, the lip brighter in colour, spreading in front, and with a yellow and white blotch. There is no denying that this is a difficult plant to keep in health for a great number of years, but it might, if properly treated, be made much more of than is usually the case, It is well known that this Cattleya enjoys a higher temperature than most other species, and consequently it is too often given heat and moisture in abundance without proper care being taken to ripen and consolidate the growths. Owing to this the plants are very susceptible to checks, more especially during the winter, and frequently fall a prey to the unsightly spot so common to the genus. To make matters worse the plants are kept too dry at the root, causing the pseudo-bulbs to shrivel, thus lowering the vitality of the plants altogether. All Cattleyas are difficult to bring round from this state; with C. superba it is practically impossible, and the effect of it will be seen in the subsequent weakly growth and puny flower-spikes. Very small plants of this Cattleya are not worth having and would be dear at any price, especially if they were bits lopped off old and weakly specimens; but given a healthy imported or established plant and the chances are all in favour of the grower for at least five or six years, after which the plants will probably begin to fail. The longest-lived plants will be those that during the first season take the best hold of the pot, block, or whatever is used for their support, while those that produce flowers before they are well established will in all probability be the first to go back. Personally I prefer pots or baskets to blocks for this species, for the roots are quite as vigorous as those of the majority of the genus, and if freely produced there need be no fear of getting them to take hold of a little compost. Not much peat should be used in this, and that which is selected must be of the very best without a particle of sand or dust. This fibre used with Sphagnum Moss in the proportion of one to three, and with plenty of crocks and charcoal, will grow it very well, and a thin layer only is required. The plants must be stood in a light position in the warmest house and watered carefully until the roots are running through the compost freely, a full supply being needed when the growth is active and from then until the flowers are past and the pseudo-bulbs well filled out. Then as the temperature is gradually decreased the water supply must be in a like manner lessened, but at no time must the plants be absolutely dry, nor must the temperature during the winter be allowed to go below 60°. A close, moist atmosphere is at this time especially to be avoided, ventilation being given every day when possible without causing a chilly draught. Very little variation is found in the flowers of this Cattleya, although some are brighter in colour than others. A white variety has been discovered in Brazil, and one or two others have received varietal names. The present is its usual time of flowering, and if kept in a fairly dry atmosphere while in blossom the blooms last about a month, this treatment serving also to harden the pseudo-bulbs. R.

LÆLIA PURPURATA.

The earliest plants of this magnificent Orchid are now in full beauty, and anyone fortunate enough to be possessed of a good stock of plants may look forward to a flowering season extending until the middle of August. This species is most satisfactory in large roomy structures with such kinds as L. superbiens and Cattleya bicolor. None of these large-growing species thrive so well in narrow, low houses, the foliage being apt to suffer from too much sunlight unless the plants are arranged at least 2 feet from the glass. Shading will prevent this, but if the light is too much subdued the growth is not satisfactory. Where there are only small houses, I would advise growers to arrange the plants as far from the glass as possible and to always ventilate as early in the morning as may be, as the oftener the air of the house is changed the better, this also allowing of the blinds being kept up a little later. Frequently damping down between the pots and occasional light dewings overhead serve also to keep the foliage cool. As soon as this feels warm to the touch the blinds must be let down, otherwise the leaves soon take on an unhealthy yellow tinge, even if not actually scorched. L. purpurata thrives in pots in a rough open compost, and in repotting keep the leads as near to the centre of the pot as convenient; this does away with the need of potting for three or four years, provided a little of the compost is removed annually and fresh substituted. Good drainage is essential, and in large pots a smaller one may be inverted over the drainage hole in the bottom, filling up to and around it with pot-sherds. The pseudo-bulbs being heavy must be firmly staked and tied—at least until the new roots form a natural support. In the best varieties this Orchid grows to a height of 2 feet 6 inches and has fusiform ribbed pseudo-bulbs, each bearing a single leaf. If care is taken not to wet the flowers, they last from three weeks to a month in good condition. L. purpurata is a very variable species, some of the better varieties being very expensive, though the commoner, not less beautiful kinds are cheap enough to be within the reach of all who have a glass house.

L. P. alba is the nearest approach to a white variety and a very chaste and beautiful kind. It occasionally appears among importations of the species and has white sepals and petals. The labellum is also whitish in ground colour with veins of rosy purple.

L. P. atro-purpurea is a deep coloured and handsome form which is in itself variable, as may be seen by comparing the flowers. In this the sepals and petals are deep rose, the lip very deep in colour with an orange-yellow throat.

L. P. aurorea is a singular form that has flowered usually with me at the end of July or early in August. The narrow wavy sepals and petals are of the faintest tinge of rose, while the lip is intense deep purple in front and veined with rose.

L. P. Brysiana is somewhat similar to the last named, but a superior variety. The sepals and petals are rosy lilac, the lip deep crimson-purple.

L. P. Schrœderæ is a large nearly white form with a distinctly marked lip. This is, I believe, still rare, though not so much so as formerly.

L. P. Williamsi is a magnificent variety, probably the strongest growing of all and the

largest flowering. I bloomed a very fine form of this from an importation some four years ago. The sepals and petals are broad, bright rose, with deeper veins and pencillings. The lip is large and spreading, yellow in the throat with a deep crimson blotch on the front lobe. All the varieties are natives of Santa Caterina, in Brazil. H.

BURLINGTONIAS.

While some despise the smaller-flowering Orchids such as are contained in this genus, others admire them, and certainly where anything approaching a representative collection is aimed at they ought to be included. It is only a small genus, comprising about seven or eight distinct species, these being rather small-growing pseudo-bulbous epiphytes. They may be grown in either the East India or Cattleya house and are most satisfactory in shallow suspended baskets. The flower-spikes are produced at various times from the base of the pseudo-bulbs and bear a number of small flowers, the sepals and petals usually rather insignificant, the lip being the most showy part of the flower. The roots are not large, but very plentifully produced when the plants are healthy, and they like a very open compost consisting largely of Sphagnum Moss and charcoal, which is apt to get too close if used in a greater proportion than one to three of Moss. About an inch of this material is sufficient for medium-sized plants, using a little more for large specimens or made-up baskets. It is in the atmospheric treatment that growers usually go wrong with Burlingtonias, these small-growing Orchids not being able to withstand fluctuations of moisture so well as grosser growing and feeding species. When the atmospheric conditions are right many of the Burlingtonias push out their roots over the top of the compost, and these serve the purpose of auxiliary conductors of moisture to the plants, and are possibly as important as those in the compost below. They do not like disturbance at the roots, and in basketing the plants, especial care should be taken with the drainage, thus obviating the necessity of frequent repotting. All the species are very subject to the attacks of white scale, this being most difficult to eradicate. The plants must be frequently sponged, and even then probably some will remain at the bases of the leaves and among the roots at the junction with the pseudo-bulbs. Cleaning must, however, be persevered with, or but ill-success will be the result, as no plant can make a free growth with the continual drain upon its resources that the presence of insects entails. A deal of attention is needed in watering during the time the plants are in active growth, a good washing from the syringe being very helpful on bright days. Burlingtonias like a clear light and only need shading when the sun is very bright, the foliage being thicker and more solid than on some larger-growing plants. While at rest they must not be allowed to remain dry at the root long, as the pseudo-bulbs soon waste under this treatment, which is not necessary to induce them to flower. I have seen Burlingtonias well grown on blocks with Sphagnum alone, but a good deal more attention is required if grown in this way. The species most generally grown are—

B. candida, a very graceful and pretty plant when in blossom. The racemes are pendulous, bearing from three to six or more beautifully marked flowers, each about 1½ inches across, pure white, excepting a yellow stain on the lip. This is usually the first to bloom, being generally in full beauty in May, and the flowers last about three weeks in perfection. It was introduced from Demerara in 1834.

B. decora is the most difficult to keep in health, as its straggling habit of growth makes it necessary to peg the pseudo-bulbs down to the compost frequently. If this is not attended to they get weaker every season and soon have a very untidy appearance. This produces longer racemes than the last species, the sepals and petals being very pale rose, the lip pure white. This is very inconstant in its time of flowering, but is now at its best in some places. A larger-growing, brighter-coloured form is B. decora picta. The typical plant was introduced in 1852 from Brazil.

B. fragrans, as its name implies, has scented flowers, but their fragrance is not liked by everyone. It is a compact-growing, free-flowering plant, introduced from Brazil in 1850. The blossoms are pure white, excepting a stain of yellow on the lip. Grower.

MASDEVALLIA HARRYANA.

This is one of the best, if not the best, of the showy-flowered Masdevallias, deservedly popular and everywhere admired. Good plants of this species with a dozen or more flowers are most beautiful objects in the cool house, and form a striking contrast to the quieter tints of the other occupants. The cultural requisites of this kind are similar in all of this section, as represented by M. Lindeni and M. Veitchi. It enjoys a cool, moist, and well-ventilated atmosphere all through the year, and it requires very careful watering, the roots being easily injured by over-abundant moisture. On the other hand, it must not be dried, or the plants will be so weakened that they will probably not produce many flowers. The great point is to keep a sweet and sound root-run, and, if necessary to do so, the plants are better repotted annually than to allow the compost to get into a sour or waterlogged state. M. Harryana is a free-rooting species in this description of compost, and if the roots are kept intact and healthy, the plants are sure to do well. Cleanliness is of the utmost importance; the pots should be frequently scrubbed and the foliage kept quite free from insects. The chief enemies are scale and yellow thrips, the latter almost invariably making its appearance just before flowering time. Where a fairly large number of plants is grown it is best to lightly fumigate them twice on successive evenings after sundown, choosing a calm evening for the operation. This should be done before the flowers show colour. If this is neglected and the thrips are allowed to run over the plants, the majority of the flowers will be ruined in appearance by the white marks left by these active little pests. There are several proprietary articles now advertised for fumigating that are much more effectual in their operation than tobacco paper and safer in application. Should green-fly make its appearance, this may be easily got rid of by dipping the plants in a solution of soft soap and tobacco water, syringing them afterwards with clear soft water. For scale, sponging will be necessary, and this must be very carefully done, as the leaves are brittle and easily snapped off at the bottom, often bringing away with them incipient flower-spikes. All through the summer, the plants, of course, must be heavily shaded, but in winter a clear light is of great importance, and the plants should be brought up as near the glass as possible. The temperature ought never to go below 45°, and if 5° higher it is all the better, as the species can never be said to be quite at rest. The plants are usually safest in rather small pots, as the larger the specimen, and consequently the more peat and Moss used about the roots, the greater the danger in winter. Large specimens may easily be made up at flowering time by selecting a suitable number of small plants, grouping these in pans and surfacing with Sphagnum to hide the rims of the pots. M. Harryana is a very variable species, the type bearing flowers 3 inches in diameter, bright magenta-crimson, with a yellow tube and throat. Splendens, regalis, and atro-sanguinea are among the best varieties I have seen, and all are natives of New Grenada, whence the type was introduced in 1869. R.

KITCHEN GARDEN.

WAITING FOR RAIN.

There has been much important work deferred this season in the hope that a change from bright, dry, hot weather to a rainy time, but which never came, might take place. In some few districts rain fell in appreciable quantities, or sufficient to admit of seed sowing and planting being carried out under somewhat favourable conditions, but in the majority of cases waiting proved of no avail. Those who missed putting out Brussels Sprouts, Borecole, and such like just when the plants were fit have since had to do this work under worse conditions than prevailed a few weeks earlier, as their plants were drawn and leggy and the ground hotter and drier than is often the case even in July or August. Old hands seldom make such mistakes. When plants in seed beds or which are pricked out receive a thorough soaking of water at the roots, they soon after transplant readily enough, and only those of the latter, moved without a ball of soil about the roots, flag badly for any length of time. I put out Brussels Sprouts, Borecole, Cauliflowers, and early Broccoli directly after early Potatoes were moulded up, and about three waterings since have been sufficient to give them a good start. They will not be overtaken by any plants put out a month or so later. It is much the same with Celery. If the trenches were got out, as they should be where possible, several weeks before they are required for the plants, there need be no great difficulty in getting them into a suitable condition for planting. Should the soil disposed over the manure be rough and hard baked, give enough water to soak the clods, and all will then break down readily enough. On no account ought Celery plants pricked out in beds to remain where they are till they press against each other, as this means drawn-up leaf stalks and an inevitable severe check, moved when they may be. While yet sturdy and nearly or quite clear of each other, give the soil about them a good soaking and soon after transplant with as much soil and roots as can be saved with each. Well fix in the trenches or beds, give a good watering, and, if it can be done, shade lightly with Pea stakes. The plants will not flag much even if no shading is given, but they ought to be given an overhead watering in the evening of every hot day and an occasional soaking at the roots thenceforward. More Celery has been spoilt by those responsible waiting for rain before attending to the planting than from any other cause. It should also be remembered that rain when it does fall must be very heavy indeed if it is sufficient to well moisten the soil about the roots of Celery in trenches. More often than not Celery suffers from an insufficiency of water at the roots during a showery season than it does in very dry weather. It is astonishing how rapidly the plants exhaust the moisture in a trench, and it is the condition of the soil well below the surface that ought to decide the point as to when to water, and not the surface. Waiting for rain is a risky proceeding in the case of plants newly put out, but after they are once well established watering may cease with advantage unless thorough soakings can be given. The value of a good mulching of strawy manure, Grass from the mowing machine and such like cannot be overestimated this season, these when timely applied doing far more good than driblets or even drenchings, more especially of cold well or spring water. Where the ground is very poor the crops are

failing badly this season, no matter how often water is given, this showing how necessary it is that they be given something stronger than water to live upon.

Waiting for rain is equally unwise in the case of seed-sowing and thinning of crops. It is true much seed has been sown that has not as yet shown signs of germinating, and many seedlings have come up only to be destroyed by insects before they have formed rough leaves. Where large breadths of land or whole fields had to be sown with Mangold and Turnips, those who were late in doing this have, apparently, little likelihood of being compensated for their pains, but gardeners have a better chance of combating against excessive heat and dryness. They, as a rule, ought to be able to get their ground into a finer free-working state, and, thanks to spade labour, their ground is not nearly so quickly exhausted of moisture as is the case with ploughed land. In addition to this they are in a position to well moisten the drills previously to sowing the seed, and when thus treated germination takes place far more quickly and surely than when the seed is sown in dry drills, covered with soil and then watered. The dry weather ought not to deter anyone from sowing salading, notably Lettuces, regularly, or say every fortnight, thinning out and leaving the plants where they are to grow, thereby avoiding transplanting; but, on the contrary, is a very good reason why this practice should be persevered with. More Carrot seed (giving the preference to Horn varieties) ought also to be sown, the aim being to keep up a good supply of tender young roots throughout the autumn and early winter months, and there should be no further delay in the matter of sowing seed of small, quick-growing Cabbages or Coleworts for planting thickly, as these are most acceptable in the autumn and winter. There certainly ought to be no waiting for rain in the case of such an important crop as spring Cabbage. Seed of reliable varieties—Ellam's Early Spring and the true Wheeler's Imperial—should be sown during the second or, at the latest, third week in July, a successional sowing being made a fortnight or three weeks later. It is true the Turnip fly is very troublesome in dry, hot weather, young Cabbage seedlings sometimes suffering badly from its attacks, but an occasional watering with only moderately strong liquid manure will hasten growth and check the ravages of the fly. This is the best remedy I have yet tried, and it answers well in the case of Turnips this season. A showery time is sometimes waited for in the case of sowing for the principal crop of Turnips, but we may easily err in waiting too long, especially when that excellent hardy variety Chirk Castle Black Stone is grown. In the colder districts winter Turnips ought to be sown in close succession to early Potatoes, but in the more favoured southern localities they may well follow second early Potatoes, levelling, breaking down the ground, opening the drills, watering these, and then sowing the seed, no matter how dry and hot the weather may be. When the weather happens to be very hot and dry in July and August, sowing of winter Spinach is often deferred till it is too late in the season for the plants to attain to a serviceable size before severe frosts intervene. The ground ought to be early selected and prepared for this very important crop, plenty of sunshine and air greatly benefiting it, while should a soaking rain fall before the time has arrived for making the first sowing, the opportunity ought to be taken of breaking down lumpy ground with rakes, this keeping in the moisture and admitting of seed sowing being done when the proper time arrives without much further trouble. Should the ground be very dry about the second week in August, seed must yet be sown then, using the watering pot for moistening the drills.

Very many Onions have been spoilt owing to those responsible waiting too long for rain before thinning. This was a mistake, even if rain had fallen when most anxiously expected, as quite small Onions, as well as Carrots, Parsnips, and Turnips draw readily enough, no matter how hard the ground may be, and early thinning would have made it better in every way for those that were reserved. Runner and Kidney Beans came up very regularly and strongly, and ought to have been freely thinned in very many more cases than was done. If rain falls heavily before these notes appear it will yet be too late to thin out, as the plants have already twined round each other and will continue to smother and rob one another as long as they live. A Rover.

Celeriac.—This must now receive attention both in the matter of drawing out any suckers that may form at the base and thoroughly drenching with liquid manure. Scarcity of root moisture induces a tough, bitter-flavoured stick, more so even than in Celery. The Celery fly is likely to attack the foliage, and must be removed by hand-picking, all insecticides proving useless. If any late sowings are yet unplanted, no time should be lost in getting the young plants out, giving a good rich larder and watering frequently after the removal. A good mulch on either side of the rows where planted singly will be of much help in preserving the moisture until the plants are established, when manure water must be given as recommended for the earlier plantings. After planting, shade from hot sun with evergreen boughs. Some may deem this waste of time, but I find from experience that crops so shaded at midsummer make quicker and better progress generally than those which have to take their chance. Be sure to soak the bed well the day before removing the plants.—C.

The Onion maggot.—During hot, dry seasons spring-sown Onions invariably suffer more from the attacks of the dreaded maggot than when a maximum amount of rain falls; consequently a sharper look out is needed and more frequent dressings of soot given. One of the best ways of applying soot is by soaking the ground over night with clear water and sowing it broadcast the following morning, again watering liberally. As is well known, soot, as well as being a powerful insecticide, is also a good manure for the Onion crops. Beds of Onions sown late for producing bulbs for pickling may now be thinned, but only moderately, as the smaller the bulbs the better. The same precaution is needed in keeping off the maggot as with the main crop. The Queen is a capital variety for sowing for pickling, being very mild, and the colour a beautiful white. Shallots must also now have another good drenching with liquid manure; this will carry the crops on to maturity.—N.

Value of deep cultivation.—Never were the remarks of "H. C. P." (p. 437) better exemplified than in a field of Potatoes close to where I write. The instance here quoted is a field of Potatoes under what I will term farm culture. The land was a two-year Clover ley. The first week in April of this year it was ploughed and the Potatoes dropped into the furrows as the ploughing went on. A small quantity of artificial manure—kainit, I think—was scattered along the rows with the Potatoes. The land being wet at the time, and heavy naturally, the bailiff considered he would be keeping the moisture in the soil by so managing it (?). The result is the Potatoes took an enormous long time to push through the soil owing to its hardened state; in fact, many never came up. The growth since has been, as might be expected, exceptionally slow. Indeed, it would be difficult to find a worse looking Potato crop anywhere. In land of this character Potatoes do not require much rain; in fact, when it is deeply cultivated little is required until the Potatoes are forming at the base. I never saw Potatoes in the garden here looking better than at the present time, in spite of the fact that one-eleventh of an inch of rainfall has been recorded here since April 26.—E. M.

November Cabbage.—In some gardens it is a common practice to sow at the present time seed of some of the small quickly-hearting Cabbages for a supply during November, and such is a capital plan, as they prove most useful just at that particular period before the Coleworts are at their best. A little frost improves the flavour of these November Cabbages, and they are as a rule much appreciated in the dining-room. To be successful, however, with this batch, good rich, cool ground must be selected for sowing the seed, a quick growth being indispensable for keeping at bay insect pests during the autumn months. Thin out the seedlings as soon as fit to handle and prick out the permanent plants on to a convenient plot where their wants can be attended to. Allow them to remain here till of good size; then take up carefully with a trowel when in a thoroughly moist state and plant on good land, watering once or twice with liquid manure. Two of the very best Cabbages for the purpose are Wheeler's Imperial and Cocoa-nut. Where Cabbage quarters have been cut over, and it is intended to leave the old plants for supplying useful sprouts in winter, those that form now and for some time to come must be removed in quite a small state, to reserve vitality for a later date. Any that have run to seed should at once be pulled up and thrown away, as all side sprouts issuing from them are sure to run to seed also.—C. N.

Field Potatoes.—In many districts these were badly injured by frost on the night of June 16. Being thus weakened, all possible care should be taken to give them any chance of outgrowing it and of bulbing in satisfactorily. Earthing up must not be postponed until the haulm has grown considerably, or the plough or hoe will do much damage amongst the extended rootlets. If favoured with showers a good surfacing of some quick-acting manure will help them greatly just at this time, another being given as soon as the tubers are as large as Walnuts.—J. C.

TOMATOES NOT SETTING.

I have a cool house for growing Tomatoes and I cannot understand why the Tomatoes do not set, they have bloomed well and have had plenty of air. I have planted several of the same kind outside and those are doing well.—J. H. Burt.

*** There are several causes of non-setting in Tomatoes, but those requiring advice upon the matter should always give fuller particulars as regards varieties grown and method of treatment. J. H. Burt merely states that he has a cool house for growing Tomatoes in, that he has also planted some outside, these latter doing well. From the fact of his having a house specially for growing Tomatoes I should say the plants are not unduly shaded by anything growing overhead, but want of abundance of sunshine and light may yet be the cause of failing to set. When the plants smother each other the flowers open feebly and are very deficient in pollen and either drop off wholesale or fail to set. The heaviest crops as a rule are set on those plants trained thinly up the roofs of houses, and at this time of year there is no necessity to tap these smartly towards midday, the pollen effecting a perfect set without this aid. At the same time, if J. H. Burt has not tried this plan I should advise him to commence now. Either tap the bunches of flowers with a hazel twig or else the stems of the plants generally with a stick padded with cotton wool. If the flowers are not sufficiently exposed to the light, partially shorten the leaves the better to admit more sunshine. Grossness of plants is also a frequent cause of failure to set well, and if J. H. Burt's are extra rank growing, reducing the

leaves to about half their original size will tend to check this, giving less water than previously helping in the same direction. It does good to allow very sappy plants to flag from want of water occasionally. Some varieties, Early Ruby in particular, usually set such very heavy lower clusters of fruit that this weakens the growth considerably, and the later formed flowers fail to set in these cases. The remedy would be more liberal root treatment. It may be the variety cultivated is at fault. With me Hackwood Park set very badly this season alongside other varieties that have done remarkably well. Amateurs would do well to cultivate Ham Green Favourite or varieties of that type, including A1 and Challenger, leaving it to others to experiment with the more doubtful setters. It should also be added that diseased plants fail to set good crops, and there are some mild forms of diseases that are only observable in the effect they have upon the growth of the plant. Applications of disease remedies, whether these be at the roots or to the top growth, invariably check setting for a time.—W. I.

EARLY PEAS.

OWING to such a severe winter many Peas that were sown in the open ground in the autumn perished through the long spell of frost, and those which survived were so eaten by the slugs during the showery weather in April, that many failed to grow, thus causing many blanks. Those who sowed in pots with a view to planting out will have found such sowings most serviceable, and there will be little cause for complaint, as the plants are both strong and well-podded. I have long since discarded the round-seeded varieties, and only grow such as are well-flavoured, selecting, as far as possible, the most productive. This season about a dozen of the early wrinkled varieties were tried, and amongst the best of the tall ones was Exonian. Though the pods are small they are well filled, and the plants continue bearing for a considerable time. Gradus came next, and was ready for use early in June, and this was followed by the Duke of York. Peas have not grown to the same height with me this season as they did last, for we have only had four-tenths of an inch of rain since April. Amongst the dwarf kinds Chelsea Gem still holds its own, the pods being produced in such abundance, and though not large are well filled; the flavour also is very good. I tried several kinds of more recent introduction, and amongst these I may mention Sutton's Seedling. The haulm, about 2 feet high, is of a pale green colour, well clothed with pods of medium size that are well filled with Peas excellent in flavour. This variety when it becomes known will doubtless be much sought after as an early kind on account of its dwarf habit, it being well adapted either for frames or narrow borders. Ready with me on June 15. This may not be considered early by some, but when we take into consideration the lateness of the season before the Peas were able to grow, it is certainly an advance on a great number of kinds that were sown on the same date. Sutton's Favourite is also another grand new variety. The haulm reached 3 feet in height, and was well clothed with pods to near the ground; both foliage and Peas are rather light in colour, but the flavour is all that can be desired. Daisy also had another trial, but was not so early as either of the forenamed. Sutton's Early Marrow is still well worthy of a place where good Peas are appreciated. It is an abundant bearer, pods large and well filled with Peas of a deep green hue. Peerless sowed at the same time grew to the height of 3 feet; both foliage and pods are dark, the latter being from 4 inches to 4½ inches in length, slightly curved and well filled with Peas of most excellent flavour. As a second early or main crop this will prove a good kind; ready for use June 21. Conqueror grows to the height of about 4 feet; the pods are borne in pairs and are either straight or slightly turned inwards, a peculiarity of this variety; they are deep green in colour and well filled with Peas of most excellent flavour. To have vegetables of any kind in perfection it is necessary that they be well grown, otherwise they will lack that freshness so essential to please the cultivated palate. Peas should not only be grown in well cultivated ground, but should be gathered as soon as ready for use. If gathered in the cool of the morning while the dew is on the pods and taken to a cold cellar till wanted for use they will be far more tender than when gathered in the heat of the day when all the juice is extracted from them by the sun, particularly in hot dry weather when the ground is parched. If not wanted for use when ready, better gather and take to a cool cellar in the early morning than allow them to remain on the haulm till they get old and tough.

H. C. P.

DEFOLIATING TOMATOES.

ONE of the ideas gained from a visit to the Channel Islands is that Tomatoes generally should be defoliated, and not a few amateurs and others have come away with the impression they have gained very important knowledge. As a consequence, defoliation has been carried out in a most reckless fashion and under a variety of circumstances to the no small detriment of the plants operated upon. This season I have already seen scores (I might say hundreds) of plants completely denuded of their foliage right up to the first cluster of fruit, and even the primary leaves, or those on the main stems, were freely shortened, so that the plants looked like mere skeletons. They reminded me of a large number of plants being grown under glass in a famous fruit-growing establishment in the west of England that unfortunately had been overrun by Cladisporium soon after this much-to-be-dreaded disease first showed itself in this country, on these being nothing but fruit and quite young leaves. In this instance the crop failed to swell to a good size or to ripen properly, and if we remove the greater portion of the healthy, fully-developed leaves from plants only just commencing to swell off their crops, we are almost certain to so paralyse their root action and to cut off supplies of sap that the fruit will be neither large, solid, nor good in quality. How can it be otherwise? The Channel Island Tomatoes are not famous for their good quality, and if the growers defoliate half so severely as do their imitators on this side of the water, the wonder is that they can make fruit-growing pay at all. Not a few of those growers are quite new to the work, and doubtless imitate one another to the best of their ability, but if we cannot do better than follow in their footsteps, gardening has fallen to a very low ebb indeed. In all probability, however, very few of them commence wholly removing the lower old leaves soon after cropping commences, nor do they follow up the practice of shortening the leaves so very closely at first. Tomato leaves are so formed as to admit of their being either lightly or somewhat severely reduced in size, and only when the foliage unduly smothers the fruit ought it to be very severely shortened. Under glass there has been and still is a tendency towards close planting. It is a mistake I have made; it is a mistake nearly every grower on a large scale has made; it is a mistake too many beginners will make; and nothing but an experience of the ill effects of close planting will bring about a more rational practice. When, therefore, the rows of plants are less than 3 feet apart, 12 inches or less apart in the rows, and ranging from 4 feet to 10 feet in height, they simply smother and ruin each other. It is then when a certain amount of foliage shortening must take place, or otherwise little or no sunshine will reach the fruit, and without this aid it will be hollow, poor in quality, and, worst of all from a market grower's point of view, light in weight. Going to the extreme of making a wholesale removal of leaves has much the same effect. When plants are given good room and otherwise liberally treated, they grow rather strongly in spite of the heavy crops the majority of them produce, and seeing that no good cultivator allows any superfluous side shoots to form, the excess vigour communicates itself to the leaves, these attaining great dimensions. Even in this case I do not favour the practice of severely shortening the leaves, removing, it may be, two-thirds of each, but consider the case well met by the removal of a third to one-half of each large leaf, doing this at twice rather than giving a single severe check.

Open-air plants are great sufferers from this idea that defoliating is the right thing. There may be some excuse found for novices who have already cut away the lower leaves and shortened the rest, but gardeners ought to know better. By all means keep side or superfluous shoots closely snipped out, but do not weaken the plants by taking away that portion of them that has to finish the work begun by the roots. Nor do I believe in a wholesale removal of leaves after a heavy crop of fruit has been formed, but not ripened. Diseases that affect the stems and leaves are also equally at home on or in the fruit, and if we severely shorten or wholly remove the primary leaves, we take away what has hitherto afforded a certain amount of protection to the fruit. Be content, therefore, to practise shortening of the leaves, and not resort to wholesale defoliation. Trimming off all or the greater portion of the leaves is about as sensible a proceeding as drying off Melons. The best Melons are cut from plants well furnished with healthy foliage, and the heaviest crops of richly flavoured Tomatoes are had from plants also well furnished with healthy leaves.

W. IGGULDEN.

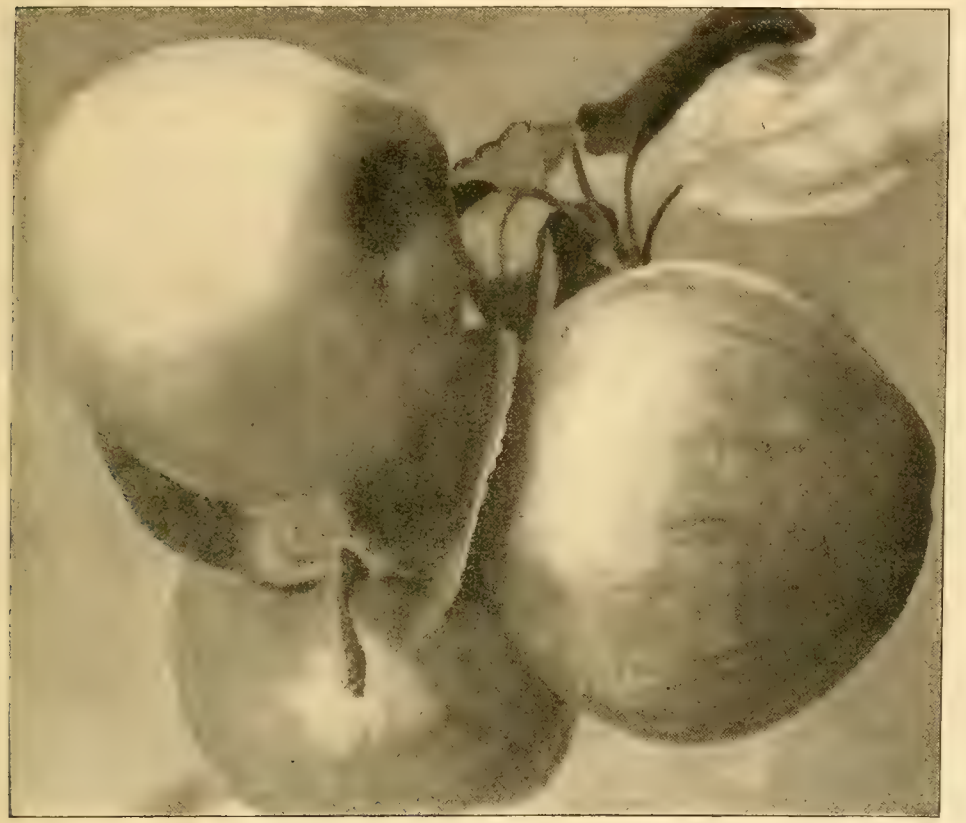
Asparagus Late Purple Argenteuil.—This is a capital variety and especially useful where a prolonged supply is needed. It merits the title "late," not from its being behind other varieties in commencing to produce its grass, but from its habit of continuing to produce it after such sorts as Giant Battersea, Conover's Colossal and Reading Giant have ceased. When well treated it produces extra large heads having a beautiful delicate purple tip—hence its name, Purple Argenteuil. Anyone purposing increasing his stock of Asparagus next year would do well to give this variety a trial.—J. C.

Transplanting Celery.—Important as it is to have good stocky, healthy plants of this vegetable, good results cannot be expected unless pains are taken at the time of removal into the trenches. The great drawback in so many instances is lifting the plants when in a semi-dry state. When this is done many of the best roots snap off and are left in the frame, while the rest suffer very quickly if exposed for a short time to sun and wind. Such plants also when planted never go away freely and often lose their lower leaves. Then, again, the trench itself is often insufficiently moist, and often watering is done in a half-hearted manner. Under these conditions there can be little wonder at so much Celery bolting away to seed. The chief point to be observed previous to removal to the trenches is a thorough moistening of the soil of the bed in which the young plants are growing. This should be done the day before, the trenches being treated in the same way. Planting completed, a final watering home should be given, and if in a very exposed situation, a few evergreen boughs fixed in the soil on one side of the trench and overhanging it will afford grateful shade until growth is resumed. In watering, mere driblets are of very little use, these often leaving the bottom roots untouched. Occasional thorough drenchings are what are wanted, the plants then standing some time without being distressed. Celery, if healthy and sufficiently moist at the roots, will stand, and in fact enjoy, any amount of sun with impunity.—J.

Orchard and Fruit Garden.

EMPEROR ALEXANDER APPLE.

This is one of the handsomest Apples in cultivation when well grown, and a great favourite with exhibitors, as its large size, good shape, and lovely colour make it a telling dish in a collection. In the back row of a collection its rich red colour is very striking if staged between two dishes of a green or golden colour, and many visitors to our leading shows make a careful note of the name with a view to ordering trees of the variety when the planting season arrives. When these trees are planted for private use only, no harm is done, as the variety crops fairly well on good soil, but when required for market the result is somewhat disappointing, as the variety is not so productive as many other cooking sorts, and when there is a crop, and it must be consigned some distance to market, it is found that the Apples are so soft that they travel badly; consequently, owing to the bruised condition of the fruit, it realises a low figure, and every day that the Apples are kept after reaching the market the bruises become more pronounced. In some parts of the west of England there are many trees of Emperor Alexander Apple grown, chiefly in standard form. These trees, as a rule, bear a moderate crop every alternate year, but, as previously mentioned in The Garden, there is no reason why such crops should not become more frequent, as it is simply a question of feeding. In one of our orchards in which sheep are fed with rich food to get them into condition for show and selling purposes; we find a marked difference in the annual crops and the size of the fruit of all varieties, and although the above kind, as stated, is supposed to only bear every second year, it crops regularly in the orchard mentioned. When grown in bush form, close or severe pruning ought to be avoided, as a mass of wood is made with little or no fruit, but by disbudding or thinning out the shoots in the growing season, so that each one left gets plenty of light, and allowing it to remain nearly full length at the final pruning, fair crops of large highly-coloured fruit will be produced most years, unless climatic influences are against the same. W. G. C.



Apple Emperor Alexander. From a photograph sent by Mr. Norman Blake, Bedford.

Fig Osborn's Prolific.—Mr. Wallis, of Keele Hall, Stafford, had in his collection of fruit at the York show a magnificent dish of Osborn's Prolific Fig. On finding that I did not grow it, he said, "You certainly ought to do, as it is a capital cropper and of very good flavour." The fruits in question were large, of a somewhat greenish cast, and in shape somewhat like well-grown fruit of Negro Largo. Some of the earlier forcing Figs, which have been introduced since the old Brown Turkey, are rather small in size. Osborn's, however, by all accounts is the reverse, as well as being (as its name implies) prolific.—J. C.

The Gooseberry caterpillar.—There are few gardens which are not annually troubled in a greater or less degree with this terrible pest. Its ravages not only affect the present year's crop, but are the forerunner of puny wood and buds in the future. Many so-called remedies are recommended, many of which are positively dangerous, the insecticides themselves being of a poisonous nature. My plan, and which has proved effectual year after year, is to thoroughly well dust the lower portions of the bushes with soot and lime, doing it in an upward direction, and, of course, directly the pest is noticed. Use the soot and lime in equal proportions; this fetches all the caterpillars down to the ground, when a second dusting can be given them, which proves fatal. This stops any further progress, and the few fruits which unavoidably become covered with the mixture are easily washed before being used. Anyone troubled with the Gooseberry caterpillar will find this a safe and efficient remedy if carried out in earnest on the first appearance of the pest. I certainly have a great antipathy to any poi-onous mixtures being used on anything that has to be eaten afterwards.—J. Crawford.

POT CULTURE OF MELONS.

Although growing and fruiting Melons in pots is by no means a new practice, it is one which does not receive the attention it deserves. Pot culture, although profitable at all times, is doubly so early in the year for the first crops, and those who have proved its value will not readily abandon it. Some favourite varieties also which are prone to make strong growth do not always set their fruit so freely as is desirable when planted out and allowed a bed of leaves to root into, especially in a dull sunless spring, when growth is often rampant and bloom scarce. The best lot of Melons in pots I ever saw was in a Kentish garden, the variety being Heckfield Hybrid, still one of the best of its class. The pots, 12 inches in diameter, were plunged in a narrow bed of oak leaves beneath which was a chamber for hot water pipes, and although the spring was not one of the best, and the temperature of the house lower at times than was desirable, the plants ripened off a splendid lot of fruit, large and of capital flavour, each plant carrying from three to four fruit. Since then I have always grown a portion of my crop in pots. It may be thought that the limited body of soil a 12-inch pot can contain is insufficient for the roots of a vigorous Melon plant, but if firm ramming is resorted to when the final shift is given, and judicious mulching and feeding when once the fruits are set, the plant will carry and mature four or even more fruits. If I want the fruit to ripen extra early, I place the pot on a piece of slate when plunging, and by screwing it round occasionally prevent any roots from penetrating the bed of leaves beneath. This of course hastens maturity. Melons when grown in pots always make a harder and more wiry growth than when planted out, and the fruit can often be secured on the first laterals from which it more often than not parts, when the plants are grown in the ordinary way. I always think, too, that the flavour of pot-grown fruit is superior. In houses where bottom-heat pipes are not overplentiful Melons often fail to set, and swell from an insufficiency of root warmth, but if the pot system is adopted more fermenting material can be rammed in round the pots just when the plants are coming into bloom, and thus an easy and free set secured. Of course, there is a good deal of labour in watering inseparable from pot culture, as Melons (like pot Strawberries), if once allowed to get dry at the roots after the fruit is set, might as well be thrown away. Twice, and in some cases three times, a day the ball must get a thorough moistening, once being with liquid manure. The smaller-sized Melons, which do not make so much growth, are admirably adapted for pot work, as they are easily supplied with all the nourishment they require; while the more robust, rampant-growing sorts (for second early crops) are by pot culture restricted and made more prolific. If fruit of the very largest size is required larger pots can be given, and I have heard of some growers using Seakale pots, these being deep, but not wide, so as to monopolise the room. I have always found canker to be less prevalent in pot-grown

plants, the hard and wiry character of the roots and growth generally, doubtless, accounting for this. Later in the season Melons may be grown very profitably in pots without the aid of a hot bed. On the kerbs of Pine stoves or similar structures where the sun can shine directly on the pots they will do well, if allowed to carry only some three fruits each and well nourished. Beauty of Syon, Gunton Orange, Hero of Lockinge, Scarlet Premier and Baron Hamilton, a grand new scarlet-fleshed variety, are all well adapted for fruiting in pots without any actual bottom-heat. J. Crawford.

Early Rivers Cherry.—Recently when out for a day I passed a cottage with a Cherry tree on its wall so heavily cropped and the fruit so large and striking, that I went to the door and asked the occupier what variety it was and how she accounted for the fruit attaining such an extraordinary size, though the crop was so great. The answer was, "The name is Early Rivers, and the only reason I can give for the big crop and large fruit is that every time I am washing I always throw the soap-suds about the roots, and if any blight appears I send the suds over the leaves." I further learned that she could always sell all the fruit in either plentiful or scarce seasons at sixpence per lb., the demand always exceeding the supply, people coming to fetch the Cherries from the house. Several lessons may be learnt from this old woman's experience. First, that even in country districts miles away from a town or good market cottagers can realise a high figure for produce of more than ordinary merit; in fact, such produce practically sells itself. Secondly, the immense value or importance of a plentiful supply of plant food to fruit-bearing trees. I cannot say what the manurial elements are in soap-suds, but no doubt potash predominates, and the quantity applied by the means of a weekly or perhaps fortnightly soaking all the year round must amount to a very considerable total in twelve months. It was very evident there had been no excess, as the fruit, wood and foliage were as good as they possibly could be. Thirdly, the benefit of having the walls of houses or other buildings covered with fruit trees of profitable kinds instead of permitting them to remain bare, ugly, and unprofitable was evident.—R. H.

Notes on Currants.—Probably Black Currants will be of more than ordinary value this year, as complaints are becoming common about the fruit dropping to a serious extent. One large grower writes me this morning (June 25) that he is losing half his crop through the drought. Through keeping the surface soil loose very few berries have fallen with me and the crop is fully up to the average. Ogden's and Lee's Prolific are bearing the heaviest crops, the fruit being large, firm, and of deep colour, and both varieties are excellent for home use or market. Red Currants are a very heavy crop, all sorts being well laden with fruit. Raby Castle is a well-known good variety, but decidedly inferior to La Conde, and no doubt, as this gets more widely known Raby Castle will be superseded by it. The growth of La Conde is strong and well furnished with large clusters of berries, fine in size and colour. The old Red Dutch and Grape varieties are also remarkable for their prolific habit and general excellence. It must be a vile season for any of the above to fail, each variety being vigorous and producing foliage early that protects the fruit in the embryo stage from frost. Reine Victoria is the latest variety that I have had any experience with, and it will hang in a perfect condition for a long period after ripening if protected from wet and birds. Amongst White Currants the new variety named Champion promises to be an acquisition, the bunches and fruit being much superior to those of any sort that I have, also producing the same freely. White Dutch is a well-proved old favourite, and is perhaps more universally grown than any of the whites, but, with all its popularity, I think Champion will take its place in the future. It would be a mistake for intending growers for market to plant White Currants on an extensive scale, as the demand is very limited. Sometimes one may dispose of a few hundredweights at satisfactory prices, and again it happens that they will scarcely sell at any price. If there is a good market annually for White Currants I have yet to discover where it is.—W. G. C.

Strawberry Royal Sovereign.—I do not wonder that Mr. Salter is much in favour of this Strawberry for forcing, seeing that it is such a grand variety in every way. Perhaps it will not prove to be so valuable as some other kinds for early forcing, but for ripening its fruit in May it is doubtful if any other can rival it. From plants in 6-inch pots I gathered at the end of May fruit each weighing 1½ ozs. It is also an excellent sort for growing in the open. Upon one plant put out last year after being forced I counted to-day fifty-five fruits, not taking into account the small ones. Several of these weighed 1¼ ozs. The colour is bright and taking in appearance. The flesh is firm and of pretty good flavour. It is a Strawberry that carries plenty of foliage, thus enabling the fruit to swell to a large size. When better known I am sure it will be much grown. It ripens early out of doors. My first fruits of it were gathered on June 11 from a west border—by no means an early position.—E. M.

GOOD EARLY NECTARINES.

I do not quite agree with "W. G. C." (p. 395) as to the terms used for the new Nectarines Early Rivers and Cardinal. I fear he was so much impressed with the small fruits on a small tree in a pot placed by the side of a basket of Cardinal (the last new one) that he at once came to the conclusion it was so superior. Our old friend and favourite, Lord Napier, was staged in such a condition, that it cut a sorry figure by the side of the newer Cardinal. Now it is scarcely fair to stage a Nectarine such as Lord Napier beside the newer Cardinal in such a small state. There is not the least difficulty in having ripe fruits of Lord Napier in May; in fact, first-class fruits have been staged several times at the Temple show. Last year good fruits of Lord Napier were staged equal to those of Early Rivers in quality, colour and size. If the Lord Napier, as was stated, had been given the same treatment as the Cardinal staged, the difference would not have been so marked as in the fruits exhibited. I have made inquiries of noted growers; some say Early Rivers is a few days earlier, but not to the extent of the fruits of one being ripe when the others are not half-grown. In this case it was Cardinal that was staged by the side of Lord Napier, not Early Rivers, but the same test was applied to Early Rivers last year or two years ago. Everyone now knows that Early Rivers forced is not a month or six weeks in advance of Lord Napier. We have not got to that perfection yet of having Nectarines so much earlier. Cardinal I have not tried; it may be as early as was stated, but our old favourite, Lord Napier, should not be shown in a small state—little larger than Cob Nuts on May 21, as there is no difficulty in having ripe fruit at that date. Cardinal must have been forced to be ripe, as it is out of the question without forcing to have ripe Nectarines, however precocious, at the date named. "W. G. C." tells us that new early varieties do not drop their buds. I have had no experience of bud-casting in these fruits, so was not prepared to find that a recommendation. Others may; I never have in the course of long experience at Peach and Nectarine forcing. Peaches are sometimes troublesome, but with me Nectarines are exempt. Cardinal, he also states, is equal to Early Rivers in every respect, but why was there no announcement as to its being sent out? I have heard that it is not recommended as an outdoor Nectarine, as it does not do well in the open, whereas Early Rivers does. I have no interest whatever in either of the fruits, only having grown one—the Early Rivers, but I do think that Lord Napier is deserving of better treatment, as it is a fine fruit indoors or out and forces readily. To get Lord Napier in May, I start it early in December, allowing nearly six months. I have yet to learn that the newer Nectarines require only about four months, but if so, it is a great gain. I have forced Lord Napier in a little more than five months, but one cannot expect long-lived trees with such treatment. It is very different to grow fruits for exhibition, and, as far as I could judge, none of the fruits were very ripe or they would not have travelled. "W. G. C." tested the flavour and described its quality, and nothing can be said against it as regards colour or appearance, but can you call a fruit good which is stated to crack badly in the open? Lord Napier does not crack, and I send this note as a plea for an old well-tried kind that has served us well.

Fruit Grower.

Garden Flora.

PLATE 1021.

THE GREATER CHRISTMAS ROSE.

(WITH A COLOURED PLATE OF HELLEBORUS ALTIFOLIUS=H. NIGER MAXIMUS.*)

This noble plant, formerly portrayed by Mrs. Duffield in The Garden, and also known as H. niger maximus in some places, is by far the boldest and most robust of all the Christmas Roses at present in cultivation. The finest flowers of this form I ever saw were sent to me from Newton Abbot, in Devon, by Mr. T. H. Archer-Hind some years ago, each bloom being 5 inches in diameter and nearly pure white in colour, though, as a rule, there is some rosy purple colouration in its flowers. H. altifolius is, I believe, as above indicated, the very best of all the Christmas Roses for rough-and-tumble culture in all soils and situations. After it I should place the Riverston variety, as distributed from Mr. John Poë's garden at Riverston, Nenagh, some few years ago. As a dainty queen of Christmas Roses St. Brigid's variety is exquisite, perfect in its pale green foliage and purest of white flowers, but, alas! like other beautiful things, it is a little capricious, and does not do equally well in all soils and situations, but as seen at its best it is one of the very finest kinds. The Manchester var. called H. niger angustifolius, not the true H. niger angustifolius of McNab and the late Miss Hope, of Wardie Lodge, Edinburgh, is also a pure white, very effective and free-flowering kind, but its leaves are more acutely serrate than in St. Brigid's form, and there are other differences very evident to the practised eyes of Mr. Walter Ware, Mr. Veitch, of Exeter, and others who grow and think much of these pearly winter blossoms. As I have said, there is generally more or less of rosy purple suffusion in the blooms of H. altifolius, but there is another form of it called H. niger Appleblossom by Mr. Ware, a narrower-leaved form, bearing a profusion of rose-tinted flowers very suggestive of the flowers of a rosy-blossomed Crab or Apple tree, as suggested by its varietal

* Drawn for The Garden by H. G. Moon, at Gravetye Manor, Sussex. Lithographed and printed by Guillaume Severeyns.



mes sentiments bien affectueux

P. Duchartre


HELLEBORUS ARTIFOLIUS



EDOUARD F. ANDRÉ.

M. Edouard F. Andre, whose name is widely known in our country as botanical traveller, horticulturist, and one of the leading landscape-architects of his time, was born at Bourges, in the department of the Cher, France, July 17, 1840. He began to study horticulture at a very early age with his father, who was a nurseryman in that town. Having completed his classical studies at a very early age, his decided taste for horticulture induced him to stay a year in the establishment of M. Leroy at Angers. Then he went to Paris in 1859, and spent another twelve months in following the course of botanical instruction and in practical training at the Museum of Natural History, under the direction of Professor Decaisne. This was the first period of Mons. Ed. André's exertions in horticulture and botany. In the year 1860 he was called by Mons. Alphand to a post under the Municipality of Paris at the time this remarkable man commenced the transformation of that city.

The appointment of Mons. André to the post of Principal Gardener to the town of Paris, which position he held during eight years, enabled him to take an active part in the laying out of the public gardens and parks of Paris, and during many years he was director of the well-known municipal establishment "Fleuriste de la Muette." Mons. André's principal part in these important works was the planting of the Park of the Buttes-Chaumont, perhaps the most picturesque public park in the world, with its high cliffs, abrupt slopes, gigantic grotto, powerful cascades, mountain scenery and natural planting. In 1866 the Corporation of Liverpool, having acquired a large piece of land from Lord Sefton, opened a competition for the laying out of a public park, and invited artists of all countries to take part in it. Two prizes were offered—one, three hundred guineas, the other, one hundred and fifty. The area of the park was 370 acres, and the competition was not only for laying out the park itself, but the arrangement of boulevards and roads and the disposition of the land around it for building. A large number competed, and among the 29 selected by the jury, Mons. André, who had adjoined to him Mr. L. Hornblower specially for the department of architecture, was unanimously awarded the first prize by the Corporation of Liverpool on April 26, 1867, and also appointed to direct the carrying out of his plans. The work lasted five years, from June, 1867, to May 20, 1872, when the park was formally opened by the Duke of Connaught (Prince Arthur).

Since that time the works executed by Mons. André can be counted by hundreds, not only in his own country, but throughout the world. Among them may be mentioned the drawings of Woodhouse-Moor Park, Leeds, the parks of Saumarez Hall and Melrose, Guernsey, Mr. Allain's in Jersey, Allerton Priory, Liverpool, Impney, near Droitwich. In Holland he planned and superintended the curious reconstruction of the grand French Louis XIV. parterres in the domain of Weldam belonging to the Count Bentinck, and also those of Amerongen, the Baron de Heeckeren's. In Denmark, the park of the Count de Friese at Friesenborg. In Russia, Otrada, Count Orloff-Davidoff's. In Austria, the parks of Prince Lichtenstein and Baron Nathaniel de Rothschild at Eisgrub, Hohe Warte, and in Vienna. In Madeira, the public gardens at Funchal. In Bulgaria, those of the residence of the reigning Prince Ferdinand. In Switzerland, M. Hübner's park at Sissach, and Vorpillière, Count Riant's, M. Micheli's at Crest, Baronne Adolphe de Rothschild's at Prégny, and M. Ern. André at Crassy. In Italy, the squares of the Piazza Bianca and the Quirinal in Rome, the plans of transformation of the great park of universal fame called "Villa Borghese," the parks and gardens of M. Hüffer at San Pancrazio near Lucca, those of the Count de Rigo at Menaggio, &c. One of the most interesting of Monsieur André's undertakings was the transformation of the Citadel of Luxembourg into a public garden. The Grand Ducal Government was compelled, in virtue of the Treaty of London in 1866, to erase the fortresses of the town,

and entrusted to Mons. André the portioning and laying out of the land into a public park, botanic garden, boulevards and squares. The work was begun in 1872, and was only completed in 1892. The park of the Hospital Pescatore was laid out by Mons. André, who also greatly changed the thermal establishment of Mendorf, and gave the plan for the reigning Grand Duke's park of Walferdange.

In 1890, the Government of Uruguay requested Mons. André to pay a prolonged visit to their country, and to prepare them plans for the remodelling a part of the ancient town of Montevideo, and planning a new city in better proportion with the rapid increase of the population and the requirements of modern taste and civilisation. This great undertaking comprised three public parks of 100 to 210 acres, ten squares, and a vast number of avenues and boulevards. These plans were sent, and the realisation of them is being gradually carried out. The beautiful gardens of Monte Carlo, laid out by Mons. André, have acquired a universal repute, not only for their elegant design, but for the numerous plants of tropical origin planted there, and which thrive admirably under the Mediterranean skies. To the same author belong the designing and laying out of the following parks: Ermenonville, Laversine, Avauges, Mégaudais, Le Lude, Les Crayères near Rheims, St. Roch, Prye, Bois-Renault, Briare, Beauvoir, Courville, Peyrieu, Melzéar, Ansennes, Iville, Pinon, Germancy, Captan, Marolles, Toussicourt, Mignaux, in France; Sentheim, Guebwiller, Lützelhausen, in Alsace, Hayange and Joeuf, in Lorraine, and many gardens on the shores of the Mediterranean. He also laid out squares of the towns of Chaumont, Cognac and Poitiers, and made capital alterations in the disposition of the thermal town of Bagnoles, creating boulevards, avenues, elegant villas, a church, race-course and a market-place.

It is natural enough to think that such works should be followed by the publication of a book detailing the artistical principles, the theory, and the practical views of the author. In 1879, Mons. André published in Paris his "Art des Jardins," a general treatise on the formation of parks and gardens, which is illustrated with eleven chromolithographs and 520 wood engravings, and has become a classic work in France and Belgium. In 1892 Mons. André was appointed by the Government Professor of Horticultural and Landscape Architecture to the National School of Horticulture, being the first time in France that official instruction in these branches of horticulture has been given *ex professo* by a specialist, which innovation has proved of much good.

The career of Mons. André has been as much that of a horticultural writer as a landscape gardener. In 1864 he published a treatise on plants which grow in peaty soil. In 1865-66-67, three volumes of reviews entitled "Horticultural Movement." In 1866 a work on ornamental foliaged plants. In 1867, "Ferns," in collaboration with Messrs. Roze and Rivière. He published an account in 1869 of a part of his travels in the East called "A Month in Russia." From 1870 to 1880 he was editor of "l'Illustration Horticole," published at Ghent, and the eleven volumes of this period are almost entirely from his pen.

A large number of our readers know the results of Mons. André's travels in different parts of the world. He was sent by the French Government on a scientific expedition to South America, and he travelled in 1875 and 1876 through the richest and some of the least explored regions of New Grenada and Ecuador. He also went to the West Indies, Venezuela, Peru and to North America. Mons. André brought back with him a considerable number of new plants, both living and dried, among which a certain number are known in cultivation, such as Anthurium Andreanum, Anthurium Dechardi, Æchmea Drakeana, Billbergia Breauteana, Billbergia vexillaria, Bromaria Kalbreyeri, Caraguata Andreana, Caraguata conifera, Caraguata cardinalis, Caraguata Morreniana, Caraguata sanguinea, Caraguata Van Volxemi, Coutarea Scherffiana, Epidendrum arachnoglossum, Eupatorium serrulatum, Ismene Andreana, Loasa vulcanica, Philodendron Andreanum, Philodendron gloriosum, Philodendron Mamei, Senecio leucostachys, Senecio sagittifolius, Solanum Poortmani, Tillandsia Arequitæ, Tillandsia Lindeni tricolor, Tillandsia umbellata, Verbesina Mameana, Nectandra angustifolia, Lathyrus pubescens, Neumann'a arcuata, Onoseris Drakeana, Podachænium andinum, Passiflora atomaria, Phyllanthus salviæfolius, Puya gigas, Sicana atropurpurea, Tillandsia Armadæ, Tournefortia cordifolia, &c. Mons. André published an important account of his voyage in the *Tour du Monde* ("Round the World"), and a scholarly monograph where he described, among 143 species brought home by him, the suggestive number of ninety-one new Bromeliads which he discovered in S. America—"Bromeliaceæ Andreanæ." One portion of his botanical collection, comprising more than 4300 species, has been published under the supervision of eminent specialists, such as Passifloraceæ, Dr. Maxwell Masters; Lichens, Dr. Müller Arg.; Melastomaceæ and Cucurbitaceæ, Cogniaux; Cyperaceæ, Maury; Araliaceæ, Marchal; Piperaceæ de Candolle; Amaryllideæ, J. G. Baker; Alismaceæ and Leguminosæ, Micheli.

In 1882 Mons. André was appointed co-editor of the *Revue Horticole*, the oldest and most important of the French horticultural journals, which was founded in 1829 by Vilmorin, Poiteau, &c. For the last twelve years Mons. André with M. Carrière has been the leading spirit of this paper, which he has made artistic, practical, and scientific. In recognition of his services, in 1892 Mons. André was elected titular member of the National Agricultural Society of France (the agricultural institute of that country). He is also Chevalier de la Légion d'Honneur, Officier de la Couronne de Chêne in Holland, Chevalier de l'ordre de Léopold of Belgium, Officier de la Couronne of Italy, &c. He is as active as ever in the performance of his duties and in the development of his artistic and scientific career, and we are pleased to know that his eldest son, M. René Ed. André, is a distinguished engineer who follows faithfully his father's steps.

name. As seen at its best with the pure white St. Brigid, or with the icy cold-white of Mme. Fourçade, this Apple-blossom is a most beautiful and distinct thing, and one to be grown extensively by all interested in winter flowers from the open air. Some few years ago Herr Max Leichtlin sent me a seedling of slender habit, which usually opens its first flowers in August. They are small in size, but pure white and most profusely produced. It is an ideal button-hole flower, and also the most certain seed-bearing form I know; hence it might be useful to those interested in the rearing of new Christmas Roses from hybridised seed. For growing in bulk for cutting one might do worse than plant half an acre of the true Bath major, a form largely grown by Mr. Walter Ware. It is not remarkable for size or purity of flower, but it is a splendid grower and produces a rich profusion of its snow-white flowers. St. Brigid is far finer, but does not, as I have indicated, do so well everywhere. Riverston is finer, but, alas! you cannot get 1000 Riverston just when you want to plant them, and this brings me to the kernel of these notes, viz., for planting in quantity use altifolius, Bath major, Apple-blossom, and Mme. Fourçade, and for extra choice blooms grow St. Brigid and Riverston. But we are not nearly at the end of the Hellebores of the H. niger section, since many growers are raising seedlings every year, and there are now many varieties as rare as the best Odontoglots or Cattleyas, and almost, if not quite as beautiful, and they are also for ordinary gardeners about as difficult to procure. This is one of the joys of the outdoor gardener, this rearing of choice variations from seed. Your correspondent "L. E. L.," whose "Garden Sketches" have been read and enjoyed by gardeners in both hemispheres, has a superb collection of choice seedling Hellebores, and there is a set of them in the beautiful gardens of Glasnevin that are a pleasure to see every year—flowers of all sizes and of varying form, some stellate, others as solid and as pure as the finest forms of Chysis or Cattleya, or as the Odontoglots of Colombia, and, moreover, of a purity comparable to that of the long-flowered Lilies of Japan, of Bermuda, or even of the Eucharis Lily of the South American streams.

Christmas Roses may be grown in various ways. One way, and the best way if soil and climate are genial, is to plant them out in rows, 2 feet apart or more, in sheltered spots, and they enjoy mulching with leaf-mould or manure in the spring, so as to conserve the natural moisture of the soil just as the growth begins in March or April. Heavy waterings with weak liquid manure are especially beneficial about the same time, as on a free and luxuriant leaf-growth all after-success of profuse blossoming of course depends. If the soil in which you must perforce plant your Christmas Roses is dry and sandy or gravelly, or if you are on limestone, then the chances are that a half-shady spot will suit these plants best. If, however, you have a deep, rich soil full of moisture and humus, then a sunny position will, in all probability, be the most beneficial to them. Another way, and a convenient one, is to grow these plants in tubs, large or small as the case may be, planted in good loam and peat and watered occasionally with weak soot and cow manure. The growth and flowering are very fine, and one has the element of portability, for it is often a convenience to move the tubs of Helleborus niger into the cool greenhouse after the Chrysanthemums are over and gone. The difficult time for choice cut flowers in most gardens is from New Year's Day until Good Friday, and this is a gap filled up for the most part by Christmas Roses in pots or tubs and the early forced bulbs.

One might say much more as to the beauty, the variety and the cultural adaptability of the best of the Christmas Roses, but it would not be at all easy to say too much in praise of these old-fashioned and historical inhabitants of our gardens, which have been popular from the most classical of Greek times, have lingered with us through the days of Turner, Gerard, Shakespeare, Queen Elizabeth and John Parkinson, and are with us now in a beauty, a quantity and in a variety never known nor so highly appreciated before in human times. It is not necessary for me to say that the plate by Mr. Moon gives a faithful picture of H. altifolius. As will be seen from the context above, the size of the flower is by no means exaggerated.

F. W. Burbidge.

The Week's Work.

KITCHEN GARDEN.

Marrows in frames.—These, where planted out as soon as the earliest frame Potatoes were lifted, will now be in a bearing state and of such a size as to require much more root moisture and nourishment than before any fruit was formed. If the plants have reached the sides of the frames the lights must be entirely removed and the Marrows allowed to ramble over the sides and ends. Go over the plants and thin out any weakly growths, these being of no use, but rather a hindrance by excluding sun, air and light from the more robust fruitful growths. It is a good plan at this stage to mulch over the surface soil for some distance round the stems with good rotten manure, as Marrows want much moisture. A good soaking of farmyard liquid, diluted to one half its strength, once in ten days or a fortnight will be of immense benefit to Marrows. Do not allow any of the fruit to remain on the plants when fully grown, as this has an impoverishing effect, and Marrows will keep in a usable condition for some considerable time if placed in a dark cool place on a brick floor. Where a few Marrow plants have been grown in large pots under glass for early fruit they may now be thrown away, those in the frames taking their place.

Leeks—main crop.—It is now high time the final planting of Leeks was made. These are best grown in trenches, except on strong retentive soils, when planting on the level is advisable. In any case work in plenty of the richest manure procurable, that from the piggery suiting them well so long as it is not in a green, rank condition. Some growers when ground is scarce plant three or even four rows in each trench, and good Leeks may be so grown, great care, however, being necessary in earthing up to prevent the soil from falling into the hearts. The trench or level plot should be well soaked with water the day before planting, and the seed-bed also, the young plants being carefully lifted with the aid of a small hand fork in order to preserve intact all fibrous roots. When planting cut a small portion of the top off with a sharp knife and sink the plants in holes made with a dibble, so that the foliage is just below the ground level, watering afterwards with a rose, and if in an exposed situation, afford shade for a fortnight by means of evergreen boughs as recommended for Celery trenches. Of course, where ground is no object, the one row trench is the best from every point of view. If any young plants are left after all the trenches are filled, they may be planted somewhat thickly on any spare well-manured piece of ground, these proving very useful for drawing early in autumn for flavouring purposes. The Lyon, Musselburgh and Ayton are all excellent sorts, Musselburgh being perhaps the best keeper and less liable to run to seed in hot, dry seasons. Dobbie's Champion, a newer variety, is also excellent and especially adapted for exhibition.

Peas.—The past few weeks have in most localities proved most trying to second early Peas, owing to absence of rain and parching winds. In very large gardens where labour is not over-abundant mulching and watering cannot always be carried out, and on light, porous soils the haulm soon gives way at the bottom, the first lot of Peas do not swell to their normal size, while secondary blossoms fail to set at all. In such places, however, there is usually a considerable quantity of Grass mowings, and these when wheeled off the lawns may be taken to the Pea plots and tipped in heaps, being afterwards levelled equally along the sides of the rows. One good soaking of water over this will often work wonders and keep the haulm in growth until rain comes. On moist ground where any tall-growing sorts have outgrown the stakes, topping the terminal shoots may be practised, this preventing the haulm from falling about and encouraging the pods to fill up quickly. If the growth has fallen through between the stakes, strong string may be used to keep it in its place, this being secured to a stout stake at intervals. May crops sufficiently grown should be staked without delay, as if once they fall over they never do so well after. Where it is desired to make another sowing for extra late purposes, Chelsea Gem will be found as good as any, the rows being about 3 feet apart. Keep all pods closely picked from rows now yielding, as this will give the successional pods an opportunity of filling properly during such hot, trying weather as we are at present experiencing. Let all first and second earlies be cleared from the ground as soon as the crop is gathered, if only for appearance sake. The ground will often come in useful for late greens, or the earliest plantings of Rosette Coleworts.

Assisting crops.—As weeds are not so troublesome as usual this summer, and are soon destroyed when hoed up by the hot sun and wind, all spare time may well be utilised in feeding all growing crops, either by the use of liquid manure or approved fertilisers. If the latter is used the best way is to water the ground around and between the crops the day before, then put on the manure, again watering it home. This is far more effectual than sprinkling it on perfectly dry ground and then watering. Globe Artichokes, Seakale, Asparagus beds, and, indeed, all similar rooting subjects can scarcely have too much moisture during the growing season. If any more offsets have issued from the Seakale plants since the growths were reduced to two or three, they must be removed at once, watering may also then more easily be performed. All small-growing subjects, such as Parsley, Radishes, Lettuce, and salads generally, are all the better for being watered in the evening, the roots then getting the full benefit of it; whereas if carried out during early morning much of the moisture is lost in evaporation.

Watering Celery.—The earliest planted rows of Celery will now be growing freely, and must not on any account be allowed to suffer from want of water. Feeding also will be needful, but strong manurial liquids such as blood, so much in favour amongst some cultivators, are not to be recommended, these imparting an unnatural and unpleasant flavour to the Celery. Their use also lays the crop open to disease and rot by promoting a sappy growth. Nothing surpasses good farmyard liquid for Celery; this may be poured into the trenches through a rose, and thus lashing the soil away from the root avoided, as is sometimes the case when spouts only are used. After watering with roses, however, a good overhead cleansing should be given with clear water.

Earliest Tomatoes.—In many cases these will have now reached the limit of their trellis room, and fruit will have set up to that point. In cases where fruit set badly towards the lower parts of the plants, a few shoots may be laid in over the old stems, removing a portion of the foliage to avoid crowding. These may be pinched when they reach that portion of the plant bearing green or half ripened fruit. Our earliest plants are fruited

in a lean-to structure occupying a shelf close to the front lights, and are trained up a trellis on the single rod system, all side laterals being removed as they appear, while the leader is allowed to grow on till the top of the trellis is reached. Beneath the shelf in question, however, and at some 2 feet distant, there is a second which accommodates an additional row of plants brought on at a later date. As the crop ripens and is cut from the lower parts of the first batch of plants the growths of the others are trained up immediately by their sides, the leaves of the former being removed by degrees. By this double batch system even in a moderately sized house the quantity of fruit obtainable is astonishing. The one-rod or stem system has much to recommend it over the pinching or many-branched, inasmuch as the fruit, though produced in somewhat less numbers, is much finer, and the aggregate weight is as great. I am growing Webb's Sensation this season and find it a capital variety for table use, being so round and handsome and of a most brilliant colour; it is also a good cropper. Should the dreaded disease appear, dust the foliage over with dry flowers of sulphur, keeping a dry atmosphere; this if not actually curing it will certainly greatly mitigate it.

J. CRAWFORD.

HARDY FRUITS.

APRICOTS.—The trees in this district are not heavily laden with fruit, but they require ample attention in the way of moisture, stopping or pinching. The shoots should now be pinched quite hard, as this will give more light to the fruit, causing it to colour and swell freely, and the trees will make fruiting spurs for another season. Much better leaders will be secured by timely stopping of useless wood, and these shoots should be lightly secured, leaving space for each to swell, as if checked in growth, gumming and canker will ensue. With regard to young trees, much better results are secured by allowing a freer growth, nailing in laterals, and allowing the main shoots to cover a large space in one season. By this plan the wall is more quickly covered and there is less disease. Young trees in some cases do not make a good start the first season, but when they do they should be encouraged, and not checked in any way by pruning; pinching lateral growths will be sufficient. If in time grossness should prevent free fruiting, it is well to lift in the early autumn before the leaves change colour rather than use the knife severely. My advice may be contrary to the usual practice, but I have to treat these trees differently on account of the frequent loss of branches, and I have found by allowing free growth there is less of this trouble. It is well to grow a few young trees to take the place of old ones, as the latter are so uncertain in their behaviour. With protracted drought few fruits require more moisture. On light soils the trees often suffer, as after the severe drought of 1893 the trees the following season lost many branches. Mulch heavily and water freely, doing the work in the evening, as then the moisture is retained longer. The mulch for young trees should not be rich, strawy litter being best.

PEACHES AND NECTARINES.—YOUNG TREES.—I have rarely seen these trees more healthy and so free from fly, curl, or blister. This may not be general in all parts, but in many trees it is hereditary. As new trees can be grown so quickly with generous treatment, I would advise giving more attention to those kinds which do succeed, removing those which are troublesome and bad growers. Where Peaches and Nectarines do thrive it is well to grow good hardy kinds. Lord Napier is my favourite inside or outside Nectarine. Such Peaches as Early Alfred, Hale's Early, Dymond, Barrington, Bellegarde, and Noblesse generally do well, and among the new Nectarines, Rivers' Orange, Dryden, Humboldt, Advance, and Pine-apple promise well. My object in giving this selection now is to enable those who wish to purchase to see their trees in a growing state, and in a measure judge of their mode of growth and fruiting, as during the next two months they will be at their best. Time will also be gained at the planting season if the trees are marked and planted early.

MANAGEMENT OF WALL TREES.—These will now require more attention. The trees where well attended to have made a splendid clean growth, and thus will now require to be carefully nailed or tied and the terminal shoots placed in position. If due attention was paid to disbudding, the shoots may be readily placed in position, but crowding should be avoided, and it is far better to cut away growths not required for furnishing to the third or fourth leaf in preference to nailing them in. It is also well to stop at this season gross wood, and so divert the flow of sap into weaker shoots. By giving the terminals more space, strong lateral growth, which is often cut away, may be nailed in and made fruiting wood. By this means a wall is furnished much sooner, and there is less trouble with gumming and canker. Should the trees grow too strong, the same measures may be taken as advised for Apricots. Watering and mulching should not be delayed, especially on light soils, thoroughly wetting the foliage as well in the evening. This will promote a luxuriant growth and keep red-spider at bay. Now is a good time to finally remove the fruits not intended to stone, as there need be no fear of dropping now. Any fruits hidden by leaves should be exposed to get good colour, removing useless leaf growth, also any nails bearing on well-placed fruits. Borders that are not moistened by syringing frequently should be flooded occasionally and well mulched, and should sudden changes of weather cause mildew to spread, lose no time in applying some mildew specific or dusting with sulphur.

CHERRIES.—With ripe fruits hanging and the trees much exposed in light land, there will be trouble with black fly, and the terminal shoots will soon suffer unless cleansed. To prevent injury to ripe fruit, dipping is the only remedy available, and quassia extract or tobacco water may be used, but whatever is employed must be used thoroughly, as a few insects soon breed and cover the growths. Foreright or lateral growth in a dirty state may be removed, but with young trees it is important to keep the terminal growth or leaders clean till the season is advanced and growth more matured. Syringing late varieties and Morellos will still be necessary, and if infested with fly, the remedies advised above will be beneficial till the fruits colour. If Morellos are heavily laden with fruit, it is advantageous to remove small, poor fruits, thus allowing those left more space. The trees should be gone over and any foreright shoots cut back to a few eyes; this will make the wood into fruiting spurs. The trees should be mulched, as advised for other fruits, and watered.

G. WYTHES.

FLOWER GARDEN.

IRIS ATROFUSCA.

THIS fair member of the attractive group of Cushion Irises was discovered in the spring of 1891 on the mountainous region which extends along the east side of the river Jordan. Broadly speaking, it may be described as an Iris susiana with much deeper coloured flowers. The accompanying engraving gives a good idea of the general appearance of the flower. The standards are of a dark lilac-brown with radiating veins of black, the falls are strongly recurved and of a blackish brown colour. When seen in good condition it is a really fine and striking plant. As to culture, this species requires no more special care than the other members of this group, but it sometimes gets spoiled by late frosts, which nip the foliage and cripple the plant.

C. G. VAN TUBERGEN, JUN.



Iris atrofusca. Engraved for THE GARDEN *from a photograph sent by M. C. G. Van Tubergen, Junr., Haarlem.*

A ROCK GARDEN.

I HAVE lately had the opportunity of inspecting the rock garden at Abbotsbury, Newton Abbot, South Devon. In the pool, which is contained within the confines of this garden, five varieties of Nymphæas were flowering, and formed an exceedingly attractive sight. Nymphæa Marliacea Chromatella, with its delightful blooms of pale saffron; N. M. carnea and N. M. rosea, the former suffused with a delicate flesh colour, the latter of a deeper tint, approaching a rosy pink; N. Leydekeri rosea, bearing blossoms of a lovely rose colour, no two blooms being precisely of the same tint, owing, in all probability, to the difference in age of the individual flowers; and N. pygmæa alba, with its white chalices, completed a picture beautiful both in colour and in form such as is too seldom seen in our gardens. These Lilies are all hardy, and planted in good soil and in not too great a depth of water can scarcely fail to succeed. The piece of water in which these Lilies were growing is irregular in shape and of no great extent. The edges of the pool are fringed with Iris, Mimulus, and Spiræa, the water that supplies it rising from under a large rock, its source half hidden by Ferns. After a short course over rocky slabs and beneath overhanging outcrops of stone, the streamlet reaches a rough rock staircase from 8 feet to 10 feet in height, and thence descends by the side of a craggy rock pile to the level of the pond, leaving it at the lower end to meander for a little distance through less rugged environment ere losing itself, as it sprang into life, beneath a rock.

Around the streamlet, which is here and there spanned by great slabs of stone, reminding one of the covering stones of the Megalithic bridges of the ancients, which still exist on Dartmoor, and on the surrounding inequalities of the ground many plants were in bloom. On one rocky mound the Iceland Poppies, yellow, orange, and white;

on another, Papaver pilosum. A fine plant of Romneya Coulteri was showing its flower-buds. Œnothera Youngi was in full bloom, and the chaste Œ. marginata expanding its large white cups. Tree Lupins, varieties of the Cistus family, Saxifrages in quantity, Heuchera sanguinea, with its ruddy flower-spikes, Campanulas, Aubrietias, Centaureas, and Coreopsis added their varied tints to the grey of the stones and the green of the Ferns that grew in the interstices of the rocks. Near a clump of the American Cowslip (Dodecatheon Meadia) a colony of Edelweiss had expanded its quaint flowers, and in a damp spot the Cotton Grass (Eriophorum) waved its heads of white, feathery down. Where the rocks ceased or became more broken, the Day Lily, Alstrœmeria, Erigeron speciosus, and Inula glandulosa were in flower, while in the background clumps of Delphinium reared their tall blue spires.

S. W. F.

THE ROCK GARDEN.

X.

June 18.—The weather has been warm and rather dry for the last few weeks, and rock plants of every description are now blooming in such abundance that to give even a list of their names alone would occupy a very considerable space. I will therefore mention only the best of such plants as are now in bloom in this county (Devon).

Choice Rock Plants now in Bloom Suitable for Select Part of Rock Garden.

Perhaps one of the smallest and neatest plants now blooming is Saxifraga cæsia, which does best planted in a sloping position wedged in between stones. The very minute silvery rosettes form a compact, hard cushion, from which spring numerous flower-stems about 2½ inches or 3 inches high, each bearing a corymb of eight or ten white flowers. Dianthus alpinus is now past its best, but other gems are taking its place, the best and choicest among them being D. callizonus, D. neglectus, and D. Reuterianus. D. callizonus is still very rare. At Exeter it is flowering side by side with D. neglectus. The flowers of the former are larger than D. alpinus and of a similar shade of bright pink, but the centre of the flower shows a very distinct dark zone spotted with white. D. Reuterianus has flowers similar to D. neglectus, but the foliage resembles D. alpinus. Phyteuma comosum requires a position similar to that just recommended for Saxifraga cæsia; it is now at its best, and its large purple flowers of peculiar shape make it an object of great interest. The Siberian Edelweiss (Leontopodium sibiricum) is also in full bloom. Three of its woolly bracts are nearly half an inch wide, and as they are longer than the rest, the flower has an almost triangular appearance. The taller Himalayan Edelweiss is only just opening, but the well-known alpine variety has been in bloom for a week or more. All three do best in calcareous soil fully exposed. Potentilla nitida, with its silvery carpet of leaves and large white or pink flowers close to the ground, is very beautiful, and forms a capital contrast to Edraianthus pumiliorum and E. graminifolius, which are still very showy with bright purplish blue flowers. A good yellow companion to these is Vella spinosa, with Draba-like foliage and bright golden yellow blossoms. Asperula nitida (described on page 417 of The Garden) is just passing out of bloom, but its neat cushion of crumpled leaves is highly ornamental, even without the pink flowers. Very pleasing just now are the bright pink flowers of that pretty little evergreen, Acantholimon glumaceum and the large pink flowers of Geranium subcaulescens. Several plants now in full bloom, though certainly in their right place in the select part of the rock garden, require, nevertheless, more space than those mentioned above on account of their spreading shoots, which should be allowed to fall gracefully over the stones. Of this class I will only mention the mauve Androsace lanuginosa, its white carmine-eyed variety, A. Leichtlini, the Fire Pink (Silene virginica) and the beautiful yellow Saxifraga flagellaris, described in The Garden of June 22. Larger choice plants of more erect growth now in bloom are Lithospermum graminifolium, with tubular flowers of bright cobalt blue; Lithospermum petræum, of more shrubby habit and broader leaves; Androsace foliosa, which requires a sheltered nook and is the largest of all Androsaces; and last, but not least, that bright yellow flower, Haplocarpha Leichtlini, referred to in The Garden a week ago.

Flowers by the Waterside.

Of the numerous bog plants now in bloom I will mention only a few of the best. Pinguicula longifolia and P. Reuteri are both charming plants for the bog bed, but owing to their very small size they deserve a prominent position where they could not be overrun by some of the taller and coarser kinds mentioned hereunder. P. Reuteri has large pale pink flowers and a darker throat striped with purple, while P. longifolia has smaller, but deep blue flowers. Probably there are several other Pinguiculas in bloom, but those mentioned are the only ones which have come under my observation. Among Orchids now in bloom I noticed the white sweet-scented Habenaria cephariglottis (from America), Gymnadenia odoratissima (alpine meadows), Orchis maculata, and Orchis foliosa. Of Primulas, the large flowers of the well known Primula japonica and the yellow P. sikkimensis are now the most conspicuous; both prefer a shady nook. Of the plants now in bloom several kinds suitable for the bog garden grow so large, that they must be kept at a sufficient distance from the choicer rock plants, and as they are most effective they are well worth a little extra care. For single specimens I would recommend Spiræa gigantea, which grows 6 feet or 8 feet high; Senecio japonicus, with deeply divided leaves and large yellow flowers, and the well-known Podophyllum peltatum, all of which are in full bloom at the time of writing. Many waterside plants more effective in groups than as single specimens are also now at their best, as, for instance, Spiræa palmata, S. p. alba, Astilbe rivularis, Spiræa filipendula, S. astilboides, and many varieties of the Day Lily (Hemerocallis). Iris germanica is just passing out of bloom, but the I. Kæmpferi varieties are only just beginning to expand.

Dianthus now in Bloom.

I have already mentioned a few of the smallest and choicest kinds of Dianthus now in season, and will here enumerate some of the stronger-growing kinds suitable more for effect among the rocks generally than for the select part. The number is so great, that a full description would be far beyond the limit of these notes. The tallest kinds now in bloom are Dianthus atrorubens and D. cruentus, both with deep blood red flowers; D. plumarius, D. glaucus, D. Seguieri, and D. arenarius are white, changing to pink. Of the D. hybridus multiflorus type, two capital representatives in full blossom are D. Napoleon III., fiery crimson, and D. Marie Pare, white, striped with pink. Of smaller kinds, I will mention D. alpestris, pink; D. annulatus, white, with deep crimson ring in centre; D. integer, fringed white; D. superbus, pink, deeply fringed; D. sylvestris, bright pink; D. suavis, white; and last, but not least, the charming little Cheddar Pink (D. cæsius). All the varieties mentioned are now blooming simultaneously, and the effective combinations that may be produced by skilful grouping are without number.

Campanulas in Bloom.

Campanulas are excellent companions to the Dianthus both with regard to season of blooming and contrast of colour. In rock gardens where a large number of Dianthus are grouped together in one part, and Campanulas of all kinds adorn an adjoining group of rocks, the effect is most striking, especially if the blue, white, pink and crimson tints of colour are allowed occasionally to intermingle with each other as we might find them in the Alps. The Campanulas now in full bloom are very numerous indeed. Some of the smallest and choicest are C. Raineri, C. cenisia, C. Erinus, C. Waldsteiniata, C. pulla, C. turbinata, C. G. F. Wilson, C. garganica, C. garganica alba, C. alpina, C. pumila and C. pumila alba. As none of these spread very fast they may be planted at a short distance from each other. The following, however, require more room as their habit is more robust: C. Portenschlagiana, C. mollis, a grand form with large blue flowers 6 to 8 inches high; C. rhomboidea alba, a splendid white variety about 1 foot in height; C. hirsuta, pale blue; C. barbata, porcelain blue; C. cæspitosa, C. carpatica.

Besides these there are now many taller varieties in bloom which would be most suitable for a background or for isolated specimens among smaller plants. One of the grandest forms for the latter purpose is C. persicifolia alba grandiflora (Backhouse's variety), which altogether eclipses the well-known ordinary white and blue forms of C. persicifolia The bright purple C. glomerata dahurica looks best in groups perhaps adjoining Iceland Poppies, with which it flowers simultaneously and forms a capital contrast of colour. C. celtidifolia and C. macrantha are both excellent for background work.

F. W. Meyer.

Exeter.

(To be continued.)

FLOWER GARDEN NOTES.

Pæonies.—Pæonies followed very closely this year on the heels of Pyrethrums, and in many cases were contemporary with the latter flowers. Few herbaceous plants have come more prominently to the front in a comparatively short time than the single and double Pæonies, the latter especially in great variety, being found in the majority of gardens where a brilliant display and plenty of cut flowers are required. When cut it is advisable, both in the case of the double and single flowers, to cut the blooms as they are emerging from the bud stage, or at most about three parts expanded, and if wanted for packing to send a considerable distance on a given day, they should be cut the previous night and placed in water. Moisture and shade are sometimes said to be essential to the growth of Pæonies, but this is hardly correct. The very fine display at Messrs. Barr's at Long Ditton is on a dry sandy soil and in the full blaze of the sun, and, so far as soil is concerned, our clumps are similarly situated. As a matter of fact, Pæonies will do well anywhere if at planting time they get the benefit of deep tilth and a liberal dose of good manure. If the natural soil is somewhat light it is advisable to press it very firmly about the plants, and also to give a good heavy mulching when the planting is finished.

Pot plants for the flower garden.—These we have to use rather extensively to make up for a scarcity of flower beds, and I never remember a better display so early in the season. The situa-

tion being bleak and liable to be wind-swept, I find zonal Pelargoniums in variety and Marguerites the best plants to furnish the colour required. The Pelargoniums are the plants that have already done service through the winter months; they get a special top-dressing early in spring and bi-weekly feeding with a fairly strong stimulant as soon as they come into flower. To secure bushy plants they are cut over rather hard about the latter end of February, withholding water for a time previous to that date to ripen the wood, and shoots as they advance are pinched back especially in the case of strong growers. The free flowering doubles in various shades are, however, the most useful for this out-door pot work. Marguerites possess the merit of growing quickly to a large size (if one can keep the maggot from them) or they will flower profusely in 5-inch pots. Trained specimen plants grown are Fuchsias, Heliotropes and Aloysias. In shady situations a few nice plants of the Sweet Tobacco do admirably, and form an admirable contrast, especially in the cool of the evening, to the bright colours of the Pelargoniums and Fuchsias. When large masses of the Tobacco are required a little seed is sown early in February, the plants shifted as soon as they can be handled, and potted on for a final shift into 6-inch pots, pinching out the centre to secure several breaks. A similar wealth of Francoa ramosa, another very useful plant for the work, is secured by retaining old plants and staking out the spikes as they develop. The two best Fuchsias for specimen work are the old Rose of Castile and Duchess of Edinburgh, a very vigorous variety with a large purple corolla and brilliant scarlet sepals. Where summer groups of plants are required and house accommodation is limited, the desired end can be partially attained by utilising a collection of hardy plants, as scarlet Lobelias, Funkias, Hemerocallis, Spiræas, Lilium candidum and the like. They should be potted up in early autumn in a bit of good soil and kept in a cold frame free from frost through the winter months.

Vases and window boxes.—These should be kept if possible full of flower and in all cases scrupulously neat and tidy, blooms past their best being promptly removed not only for appearance sake, but that the rapid succession of flower can be the more readily secured. It is always advisable to leave a little stock of plants to fill up any gaps that may occur. This year, for instance, we lost several Ball of Fire Tropæolum that were used as an edging to white Marguerites, but were able to fill up the gaps with some good plants of a double pink Ivy-leaved Pelargonium. A great point in the filling of vases and boxes is to use thoroughly good sturdy plants that have also been well hardened off. They come away quickly and soon furnish the places assigned them. I have before referred to the value of Petunias for such work, and this year they are doing remarkably well; the varieties grown are Giant of California and Empress, both very free and vigorous, and throwing flowers of extra size and quality. East Lothian Stocks are by no means to be despised for the back and centre of window boxes with something planted in front as a trailer. It may be noted in connection with boxes and vases, as also with all pot plants used for grouping, that so soon as they are full of flower something in the way of a stimulant must be employed to keep existing growth healthy and fresh and to encourage the steady progress of the same. The majority of artificial manures leave behind them an odour that would be very objectionable in the immediate neighbourhood of the dwelling-house, and I have found nothing better as a stimulant than liquid manure made with fresh cow manure; there is a staying power in this that is just the thing for all soft-wooded pot plants.

Carnations.—As the stock of border Carnations saved over from the winter of 1894–95 is not in the majority of places a large one, some varieties having totally disappeared, every bit of grass, however small, will have to be utilised for layering. It is not likely to be a matter, as in 1894, of choosing a few of the best shoots from each plant. I have before noted the advisability of putting a small quantity of soil nearly all over the border rather than heaping up high mounds immediately round the plants. Our four most reliable sorts, Countess of Paris, Raby, Mrs. Reynolds-Hole, and Murillo, have come through the winter very well, and to these may be added Goldfinder and Sir Beauchamp Seymour. The old crimson and the white Cloves in one or two varieties have suffered most. Where, in the course of layering, a slip of the knife leads to the severance of a shoot, it will doubtless be found advisable to insert it as a cutting, and it may go in the bed prepared for the Pinks, taking care to water and shade for a short time until root action has commenced.

E. Burrell.

Claremont.

Societies and Exhibitions.

NATIONAL ROSE SOCIETY.

Gloucester. June 27.

Roses have come on so rapidly during the past fortnight, and the weather has been so hot and dry, that we shall not be far wrong in saying the season of their most general beauty and greatest quantity is fast disappearing. There is usually a period of from two to three weeks when almost every grower is in "full cut," and this has been earlier than for many seasons. The chief event of last week was the National Rose Society's exhibition at Gloucester, where a most successful show was held in connection with the Gloucester Rose Society. So good were the Roses throughout and numerous the competitors in most classes, that more than one looked upon it as the best provincial show held by the N.R.S.

Messrs. R. Harkness and Sons, Bedale, Yorkshire, were the winners in the premier class for trade growers, staging a magnificent forty-eight single trusses of distinct varieties. As no less than eight competed here, and such redoubtable growers as G. Paul and Son, Cheshunt, F. Cant and D. Prior and Sons from Colchester, also G. Mount, Canterbury, and The English Fruit and Rose Company, Hereford, were unsuccessful, it is proof of the sterling quality of the winning stands. Messrs. Harkness had the silver medal Hybrid Perpetual here, but the winners of these will be described in due course. Mr. B. R. Cant, Colchester, was a good second. The same order was observed in the class for twenty-four varieties, three of each, but ten or eleven competed in this case. The twelve blooms of Lady Mary Fitzwilliam that took first for Mr. B. R. Cant were simply magnificent. The class of the day, however, was one of twelve singles, open to all amateurs, and here Rev. J. H. Pemberton won the silver cup presented, a silver-gilt medal going to Mr. E. B. Lindsell, who was somewhat unfortunate not to be first, and would undoubtedly have been so a couple of hours later. The silver medal and the bronze medal went to Mr. J. Parker, Hitchin, and Mr. W. Drew, Ledbury. There were sixteen competitors, and all of the stands were good. The class for twenty-four singles was also strongly contested, Mr. Walter Drew beating Mr. E. B. Lindsell. Eleven competed in a class for six trebles, distinct, and here the order was reversed, Mr. E. B. Lindsell having some of the grandest flowers in the show. Mr. George Moules, of Hitchin, was fortunate enough to carry off two first prizes with the only two boxes he brought, and this in by no means weakly contested classes—a great encouragement to small growers. Horace Vernet was shown well, most of the leading stands containing this grand dark Rose; so also was Her Majesty.

When we come to the Tea and Noisette section it is difficult to say enough in their praise, but we were sorry to miss the Oxford Roses here. None of those grand boxes of Comtesse de Nadaillac were seen, although the variety figured well in various stands. The twenty-four blooms from D. Prior and Son, Colchester, were simply perfect. In the premier class for Teas among amateurs the first also went to Colchester, Mr. O. G. Orpen being successful and beating the Rev. A. Foster-Melliar, who was second. There was a grand dozen of Marie Van Houtte staged by Messrs. D. Prior and Son for twelve of any Tea or Noisette. Mr. B. R. Cant, F. Cant and D. Prior and Son won the prizes for twelve distinct Teas (three of each), and open to all England, amateurs or nurserymen. We were not so much impressed by the garden Roses, nor by the "displays" as usual. No new Rose was put up worthy the name, and no award was made. The Penzance Sweet Briers were good, and we have evidently not exhausted or by any means come to their chief beauty. Among the new ones was a bright semi-double called Jeannie Deans, which is more promising than any of those yet in commerce. There was a very pretty arrangement of arches covered with Roses shown by Messrs. Phelps and Co., Cardiff, that drew much attention. Mr. Conway Jones, Hucclecote, was remarkably successful both in the general classes and those confined to local growers. The silver cup for eighteen singles, the silver medal for six Teas, and the silver salver presented by the corporation for twelve singles fell to his share among the local prizes. Ernest Metz was good in many cases. It is somewhat singular that so often the silver medal Roses should be found in indifferent growers, or those that only produce a good bloom now and again. If we except Catherine Mermet, The Bride, A. K. Williams, Mrs. John Laing, Gabriel Luizet and a few more, we find weak growers and uncertain bloomers often giving us a bloom of extraordinary merit. Last season it was Cleopatra and Margaret Boudet. At Gloucester the Hybrid Perpetual in the nurserymen's classes was Comtesse de Ludre, a Rose seldom seen, although it was sent out so long ago as 1880. The specimen here was simply perfect in every way, but the usual growth of this variety is not what one would wish. The other medal Hybrid Perpetual was Horace Vernet, and all of us know what a disappointing grower this is, although it so often produces a magnificent specimen flower. La Boule d'Or and Ethel Brownlow (the two silver medal Teas) are not among our best growers, and it is only during exceptional seasons that we find really first-class blooms of them.

GARDENERS' ROYAL BENEVOLENT INSTITUTION.

The annual dinner of this institution took place on Friday, June 28, in the Whitehall Rooms, Hotel Metropole, the Duke of Fife, K.T., in the chair. The subscriptions realised a large sum, not too large, however, to make one feel content that such an institution as this is receiving sufficient support.

The tables were delightfully decorated with the choicest flowers and fruits contributed by many nurserymen and gardeners, and it would be safe to say that at no dinner are the tables more beautiful than at the annual gatherings of the Gardeners' Royal Benevolent Institution.

There was a large company present, amongst those we noticed being Sir Trevor Lawrence, Bart., the Rev. W. Wilks, and Messrs. G. A. Dickson, J. G. Veitch, J. Hudson, J. Douglas, G. Norman, W. G. Head, J. Protheroe, H. Turner, A. W. G. Weeks, H. Williams, H. J. Cutbush, A. F. Barron, P. Barr, G. Gordon, G. Wythes, W. Poupart, G. Monro, J. Walker, David Syme, T. F. Rivers, W. J. Jeffries, N. Sherwood, and W. H. Cutbush.

The Duke, who was received with tremendous cheering, proposed the usual loyal toasts, and the toast of the evening, "Continued Success to the Institution." He said that the Gardeners' Royal Benevolent Institution "was the only one of its kind in Great Britain. Its great object was to assist the aged and infirm by means of pensions, and to inculcate the admirable principle of self-help by giving a preference to those who had subscribed to its funds." All gardeners, the chairman said, were not in the employment of the rich.

Most of them had to toil unceasingly, and, unfortunately, misfortune overtakes many of them. To assist such this society was founded in 1838, and since then it had distributed in pensions and gratuities about £65,000. At the present time 156 persons were receiving permanent assistance—77 men and 79 women—while there were 36 pressing cases on the list. The pensions were originally £16 per annum to men and £12 per annum to the women, but the amounts were increased in 1885 to £20 and £16 respectively—not, he thought, an exorbitant sum. Persons of 60 years of age and upwards if incapacitated from work, and if they comply with the rules, or younger in case of total disability, are eligible for pensions.

This toast was responded to, in the unfortunate absence of the treasurer (Mr. Harry J. Veitch) through ill health, by Mr. George A. Dickson. He said everyone, he felt sure, in the room would regret the absence that evening of Mr. Veitch, who worked so nobly for the institution; and in the course of a lengthy speech mentioned that the funded property of the institution consisted of £25,000 consols. Of that sum £20,000 had been recently invested, with the result that the income was increased by £50 a year; but greater support was needed. Their assured income was only about £800, whereas their liability for pensions alone was £2804, to say nothing of funeral expenses, which were sometimes granted in exceptional cases. Out of 50 candidates at the last election only 14 could be elected. Mr. Dickson therefore said he must join with the chairman in appealing for further support. An additional assured income of £700 was necessary if the committee were to meet all the claims.

"Horticulture" was the title of the next toast, proposed (in the absence of Sir J. Whittaker Ellis, Bt.) by Mr. W. J. Jefferies, of Cirencester. Sir Trevor Lawrence responded, mentioning that great progress had been made of recent years in every department of horticulture. "The Health of the Chairman" was proposed by Mr. Sherwood, and the toast was received with great applause.

"The Health of the Secretary," Mr. G. J. Ingram, was proposed by Mr. Dickson and received with enthusiasm. Mr. Ingram, in reply, said that in these days of depression it needed something more than stereotyped circulars to sustain interest in any institution.

"The Stewards" was proposed by Mr. Arnold Moss, and responded to by Mr. G. Monro.

In addition to the sums already acknowledged, the following were announced as having been received, making up a grand total of £1900 with the sums already advertised: The Duke of Fife, £30; Mr. C. Czarnikow, 10 guineas; Messrs. J. Veitch and Sons, £25; Mr. N. Sherwood, £21; Messrs. Rothschild, £105; Alfred de Rothschild, £10 10s.; Mr. G. Monro, 105 guineas; Mr. G. J. Braikenridge, 8 guineas; Mr. G. W. Dawes, 10 guineas; Messrs. Protheroe and Morris, 5 guineas; Mr. J. Coleman, 5 guineas; Sir Trevor Lawrence, 10 guineas; Mr. E. Stern, 10 guineas; Mr. G. A. Dickson, 5 guineas; Mr. G. Profit, £21; Mr. G. Maycock, 10 guineas; Wm. Thomson Memorial Fund, £98; part proceeds of 3rd edition of "Cypripediums," by R. I. Measures, £7 10s.; Mr. J. Lee, 5 guineas; Mr. E. V. Low, 5 guineas; Mr. W. G. Head, £5.

A letter was read from Mr. J. Lee regretting his absence from the gathering that evening, but he had now retired at the age of nearly 90 years, after having attended every anniversary except one, and that occurred on his wedding day. Such a record is a notable one. The institution has known no more devoted helper than Mr. Lee.

The Royal Gardeners' Orphan Fund.—A meeting of the committee took place at the Horticultural Club on the 27th ult., when the following special donations were announced: From the William Thomson Memorial Fund, £65 13s. 2d.; Mr. J. T. Anderson, Commercial Street, E., £1 1s. 0d.; Messrs. J. Laing and Sons, Forest Hill, £1 1s. 0d.; Mr. R. J. Measures, proceeds of sale of third edition of "Cypripedium Hybrid Species," £7 10s. 0d.; Mr. A. Stirton, Wrexham, 5s. A cheque was drawn for £201 10s. 0d., the quarter's allowance to the orphan children of deceased gardeners, an amount which shows the value of such a fund to many widowed mothers left in difficult circumstances, and which should induce some who do not yet subscribe to at once do so.

NOTES FROM ALMONDSBURY.

The drought here is very severe—·02 in. of rain since June 1—yet the garden does not seem to suffer very much. Roses have fairly survived the winter and their bloom is astonishing. No insect pests of any kind. The Bourbons are really magnificent. A hedge of mixed Japanese and Chinese, multiflora and rugosa, the Cherokee, R. Brunonis, and various Briers, about 30 yards long and in places over 12 feet high, is very charming. I find Michauxia campanuloides likes this weather very much and its strange flowers are the wonder of many. Iris ochroleuca is in full beauty and the bees revel in it. Then how gloriously the sun brings out the bloom of the old plants of Geranium of all kinds and colour! Ipomæa pandurata is struggling to get over a 14-feet wall. A seedling Crinum, with leaves 4 feet long and spike of bloom (delicate pink) a yard high, is in a corner of the greenhouse, and above it Ipomæa rubro-cœrulea is climbing over the roof. This year some hybrid Streptocarpi have bloomed most freely; in this heat I find they need to stand in water. The orchard is filled with bloom of Canterbury Bells and Evening Primroses—the result of emptying the ash-bin round the trees—the seeds arriving there from drawing-room blooms of previous years. On these hot nights the fragrance of Japan Honeysuckle is delightful about 10 p.m. Iris Kæmpferi, from clumps bought in March, is full of buds. I grow all in tubs near a pump and water daily. Then Carpenteria californica, to my delight, is full of bloom in a corner of the kitchen garden. White Carnations promise well. Alstrœmerias are very tall and full of bloom. I am convinced that they like plenty of deep, damp soil and a hot sun. I have lost many clumps from neglect of this. I would place the next lot I have in a ditch filled up with rich soil, exposed to the afternoon sun. I have several clumps of pure white Iris anglica, and these have done well this year. Why does I. hispanica always fail with me? I. Milesi in the open border has bloomed finely.

C. O. Miles.

Notes from Baden-Baden.—Cnicus Falconeri is a stately plant; the hanging big heads on a much-divided stem look very strange. The leaves are large, dark green, and the flowers are white. Lathyrus abyssinicus is attractive from its clear ultramarine-coloured flowers. Veratrum californicum is showy on account of its large white flowers. In Gerbera Jamesoni we have one of the most showy composites; its large brilliant crimson-scarlet flowers, which continue from April to November, are now at their best, enjoying the warmth of summer. Tropæolum Leichtlini rambling over some boughs is clothed in grey and deep yellow. Gentiana Moorcroftiana blooms very freely; the flowers are small, bright blue, and entirely hide the foliage. Silene Hookeri, now re-introduced, shows its starry white flowers, and a group of Calceolaria alba with its numerous blooms of purest white is quite charming. The succession of summer-flowering Gladioli is opened now by G. aurantiacus, bright orange; G. Leichtlini, deep red, and a new species, greenish yellow with bright red streaks and points. I may mention the germination and growth of one of the most remarkable alpines ever introduced. Campanula mirabilis, perhaps extinct for ever in its native home, is soon to adorn our rockeries with its wonderful flower pyramids.—Max Leichtlin, *Baden-Baden.*

Notes from Chester.—We sent you last week flowering sprays of several varieties of the Mock Orange. There is yet another that is just now exceptionally fine, Philadelphus laxus, which is of striking beauty, with its large flowers of pure white set so gracefully and emitting such a delicious fragrance. We think there is nothing finer in the range of varieties. The Spiræas are in fine array. Spiræa Douglasi is valuable on account of its compact, dense spikes of colour. S. callosa, with its bunchy heads of less pronounced pink, is also pretty. The sprig we send you of S. Anthony Waterer does not fairly represent the character of the plant, though it gives the glory of its colour. S. flagelliformis is so distinct as to render a second look needful to assure oneself that it is a Spiræa at all. Hypericum Moserianum is one of the showiest of the St. John's Worts. Its bold, brilliant flowers, with circlets of rosy tipped anthers, its finely arranged foliage, and its general habit make it a most desirable addition to this valuable family of hardy plants. Cytisus nigricans is a very showy species. Its long upright flowering spikes of rich yellow blossoms and its dark foliage give it a conspicuous appearance. Long rows of standards all in full flower make a quite unique feature in the ornamental garden. The herbaceous borders and quarters are every day presenting new features. The English Iris is now in full glory. The Star of Bethlehem (Ornithogalum arabicum) is also very fine. Its flowers are distinct with their white petals and almost black centres. In passing through the glasshouses there are some very delightful things in full bloom. Dracophyllum gracile, Streptocarpus hybrids, and Tremandra verticillata are all beautiful. The heavy rain of Wednesday last (when our rain gauge registered a rainfall of nearly 2 inches) has had a remarkable effect upon vegetation generally, and though fully expanded blooms were dashed and spoiled, everything now is looking fresh and healthy.—Dicksons.

NOTES OF THE WEEK.

Geranium argenteum.—This is a dwarf, but pretty species that looks well in the rock garden. It hides the ground with tufts of shining silvery leaves and bears a profusion of pale lilac flowers in succession for several weeks.

Edelweiss (Leontopodium alpinum).—How beautiful and free the Edelweiss has been this year. For the last six weeks the large heads of woolly bracts have been most interesting. I should think the severe winter followed by such warm weather has been in its favour.—J. W. H., *Worcester.*

Lilium Beerensi is a pretty hybrid Lily now flowering with Mr. Ware at Tottenham. It is the result of a cross between L. chalcedonicum and L. excelsum, in leafage resembling the former parent, but the flower (more like that of L. excelsum) is of a deep apricot colour, with long, prominent, orange-scarlet anthers.

An Australian garden.—Mr. J. W. Porter sends us two beautiful photographs of his garden in Adelaide which show well the advances that have been made in gardening in this district and the fine climate enjoyed. The garden has only been planted about seven years. Sub-tropical plants thrive admirably, fine specimens of Palms, Dracænas and Cannas being prominent in the photographs sent.

Campanula muralis var. Portenschlagiana.—This Campanula has been beautiful during the last month and has been admired by all who have seen it. The plants, which cover a space of about 2 yards square, grow about 6 inches high, the flowers bright blue, shaded with purple, and much larger and deeper in colour than those of C. muralis which I have growing close by.—W. H.

Helenium Bolanderi.—This, one of the earliest flowering varieties of this showy family, appears to be able to resist the drought much better than many hardy flowers of the present time. A large bed of it in Mr. Ware's nursery at

Tottenham is a mass of bright colour. It is a compact grower about 1 foot in height, the flowers rich orange-yellow with brownish black centre.

Lilium Parryi is a handsome Californian Lily that grows well and flowers freely in Mr. Ware's nursery at Tottenham. It belongs to the pardalinum group and has rich yellow flowers spotted with black, strong shoots bearing a dozen or even more blooms. It is easily grown in moist peaty soil with the partial shade of shrubs near, and those who have a suitable place for it might plant a bold group.

Codonopsis ovata.—This pretty Bellflower does well in Mr. Ware's nursery at Tottenham, and is now in profuse bloom. It lacks the rich blue colour of most Bellflowers, but has a quiet beauty of its own. Its large drooping flowers, borne abundantly on strong erect stalks, are of the palest blue shade externally, but the inner base of the flower is most distinct with a zone of rich yellow surrounding the black stigma. It is a good plant for the rock garden.

Centaurea ruthenica is one of the vigorous growing hardy plants of the Composite family that few take any notice of, yet planted in a suitable position it would be valuable. The proper place for it is associated with shrubs in bold groups away from the beds and borders of choicer flowers. We noted a fine mass of it at Mr. Ware's, bright with many flowers, which are as yellow as those of the Sweet Sultan, quite twice the size and good for cutting.

Sorbus majestica and S. nepalensis.—The Pyrus and Sorbus families contain several very handsome trees of moderate size, but bold and varied in outline and beautiful in rich leaf growth. Two that we specially noted at Knap Hill are those above mentioned. S. majestica is of a pyramidal habit and carries a very dense head of large, deep green leaves. S. nepalensis is quite as robust as the preceding, but its leaves are grey-green above, quite of a silvery tint below, and lovely when the tree is waving in the wind.

Delphinium grandiflorum fl.-pl.—This old species is not often seen in gardens, and yet there is no more handsome flowering plant at the present time. A large bunch of it was conspicuous in Messrs. Veitch's group of hardy flowers on Tuesday at the R.H.S., and among the fine kinds there shown not one surpassed this for beauty and depth of colour. It is almost as blue as the Gentian, and the flowers, although double, are prettier than those of the double florists' varieties, and gracefully disposed in branched heads adapted for cutting.

Magnolia glauca. — This noble American Magnolia has been in the country about 50 years, and yet we very rarely meet with it in gardens. There is a good tree of it in Mr. A. Waterer's nursery at Knap Hill, and we were charmed to see it there a few days ago bearing many lovely flowers. It is almost evergreen and handsome in leaf at all times, the leaves being of a polished green above and of a pronounced glaucous hue beneath, which is seen to advantage in a tree 15 feet high. It wants a moist peaty soil, but it is a pity more do not grow it.

Zenobia speciosa and Z. pulverulenta.—These are certainly two of the most beautiful shrubs in the Heath family, combining graceful growth with lovely blossoms of wax-like substance and perfect purity of colour. Z. pulverulenta is peculiarly distinct and charming with its silvery shoots, the leaves and stem alike in colour. We noted a large batch of seedling plants in Mr. A. Waterer's nursery at Knap Hill, and although the seed was that of Z. speciosa, plants of Z. pulverulenta in its best form were also present in fair numbers.

Weigela Eva Rathke is a distinct and beautiful variety that will be valued not only for its deep rich colour, but for its late and successional blooming. We saw a quantity of it in Mr. A. Waterer's nursery at Knap Hill, and the plants were gay with flowers, whilst there were many buds still to expand. Even small plants were wreathed in bloom, so that it flowers abundantly when young, but its effect when the bushes grow large and throw out their arching wands will be superb. It should be noted as a shrub to plant by those who have not got it.

Brodiæa volubilis.—This charming Brodiæa, in addition to its peculiar habit, so different from that of all other species, is besides handsome in flower, and a quantity of it shown in the group from Messrs. Wallace, of Colchester, at the Drill Hall on June 25 attracted much notice. It is rarely seen at all either at shows or in gardens, and yet there is no more difficulty in growing it than there is other Brodiæas, only something for it to climb upon is most essential. The specimens shown were entwined around Bamboo canes 3 feet or more in height, and bore at the top of the canes close heads consisting of twenty or more flowers, which are of a deep rose colour.

Public Gardens.

Royal Botanic Society.—At a meeting of the council of this society, held last Saturday, it was decided to open their gardens, in Regent's Park, to the public on every Monday in July, August, and September at an admission fee of 1s.

The Thames Embankment.—"The Temple" writes to us: "Can any of your readers explain upon what principle of forestry the Plane trees of the Embankment, all along the river from Westminster to Waterloo Bridge, have just been shorn of half their beautiful fresh foliage? The work of stripping the trees and destroying their grateful shade rapidly approaches me, and I crave your protection, or, at least, some words of explanation from you."

Lincoln's Inn Fields, says the *Daily News*, should have a little more attention from the County Council. It is not in a good condition. The poor people of the adjacent slums for whose benefit it was bought have shown themselves only too sensible of their new privileges. But the Grass—as much of it as the sun of June has left us—is rapidly disappearing, and altogether the garden presents a most forlorn appearance. This is a pity for many reasons. Something should be done, and that speedily, to give everyone his rights in the place—the children who want their playground, the grown people, the aged and infirm who have an equal need of their quiet walk or lounge with a sight of the flowers. A writer in the *St. James's Gazette* says, and but too truly, that at present the children seem to have it all their own way, and that the garden is rapidly reverting to the state of nature. The position of the ground and the circumstances under which it was acquired are peculiar, and the County Council must take care that the garden does not become an awful warning against the policy of further acquisitions of the kind.

Metropolitan Public Gardens Association.—The Earl of Meath writes from 83, Lancaster Gate, under date June 21: "Bordering on the Thames at Putney is an old-fashioned house standing in an equally old-fashioned garden of about 2 acres, known as 'Riverbank' and containing some remarkably fine Elm trees, which form a prominent feature of the landscape, especially when viewed from the river and from Bishop's Park, Fulham, on the opposite shore. The property is now held under a lease expiring at Michaelmas, when the owners intend to place it in the builder's hands. The mansion is to be pulled down, a road is to be made through the garden, and the usual style of small villa residences will be run up on either side. Thus this shady riverside retreat will be wiped out of existence. Can nothing be done to save it? An open space adjoining the river is equal to one of ten times the size elsewhere. At the urgent entreaty of the Metropolitan Public Gardens Association the owners have agreed to stay their hands as regards arranging with builders until the end of this month. Meanwhile they offer to sell us the entire property for £5100, or, as an alternative, the riverside portion only, about a quarter of an acre, for £1400. . . . . The larger scheme, therefore, is by far the most attractive, as there would be no road, both the garden and the mansion would remain intact, and the latter would be available for public purposes, as at Ravenscourt, Clissold, and Waterloo Parks. I appeal to your readers to place the association in a position to secure this riverside property during the six short weeks that remain. . . . . I shall be glad to receive donations, both large and small, towards the purchase of this site, which should be sent to 83, Lancaster Gate, London, W., crossed Coutts and Co., and I earnestly hope I may be fortunate enough to obtain a sum sufficient to buy the property before the end of next month. If unsuccessful, I shall, of course, return any money I may have received. One generous donor has already sent me £100."

The weather in West Herts.—In June the weather remained warm throughout the daytime and was on several occasions very hot, but on many nights the readings were below the average for the month. With the exception of the same month in 1893, the ground was warmer than in any of the previous nine Junes, and about 3° above the mean for that period. The most noteworthy feature of the past month was, however, the scanty rainfall, rain falling on only eight days, and to the aggregate depth of less than half an inch. The average fall of rain at Berkhamsted for June during the past thirty-nine years comes out as 2¼ inches, so that the amount deposited last month fell short of the mean by nearly 2 inches. During those thirty-nine years there has been no June in which the rainfall has been as light. Taking May and June together we get a total of less than an inch; whereas a seasonable amount would be 4½ inches. Not a drop of water came through the 2½ feet of soil in either of the percolation gauges during the month. The atmosphere was, as a rule, calm and exceptionally dry. Besides being so dry, June was also an unusually sunny month; indeed, we have to go back to the Jubilee year in order to find a June in which the sun shone for as great a number of hours.—E. M., *Berkhamsted.*

Variegated Elder (*W. M.*).—The variegation is certainly of a distinct character, and decidedly pleasing if it remains constant. The Elder roots readily from cuttings. After the leaves have fallen make the shoot into cuttings and put them in firmly in a safe place where they will not be disturbed. Probably every one will grow the following spring.

Royal Horticultural Society.—The next meeting of the Royal Horticultural Society will be held in the Drill Hall, James St., Victoria St., on Tuesday, July 9, when a special show of Roses will be an attractive feature. At 3 o'clock Mr. Francis Darwin will deliver a lecture on "The Effects of Darkness on the Forms of Plants."

Names of plants.—*W. H. C.*—1, Lychnis viscaria fl.-pl.; 2, Hieracium aurantiacum; 3, Betonica grandiflora; 4, Lychnis chalcedonica; 5, Veronica subsessilis longiflora; 6, Spanish Iris.——*G. R. W.*—Sidalcea candida.——*Jas. Martin.*—Cattleya gigas.——*H. E. Dreicett.*—Pale form of Cattleya Mossiæ.——*F. M.*—Trachelium cœruleum. An engraving of it appeared in The Garden of April 27 of this year.——*E. M.*—Lathyrus grandiflorus and L. azureus.——*G. A. J.*—Lælia grandis tenebrosa.——*Vero.*—Lysimachia clethroides.—*Eustace F. Clark.*—1, Geranium sanguineum var. lancastriense; 2, an ordinary form of Masdevallia Veitchi. May perhaps be better as the plant increases in vigour. The Campanula is not uncommon. Streptocarpus too shrivelled.——*Medway.*—Cephalaria tatarica.——*Cosmos.*—Rose Princess Louise Victoria.

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"This is an Art
Which does mend Nature; change it rather; but
THE ART ITSELF IS NATURE."—*Shakespeare.*

STOVE AND GREENHOUSE.

MUTISIA DECURRENS.

I ONCE went 200 miles to look at a plant of this, reputed to be grown under hardy conditions for some years in succession. I never regretted it, though I did not quite find all I had been led to expect. The plant chanced to be in bloom, and the big composite flowers were so grand that I made up my mind to grow the climber by any and all possible means I could command. What I saw was a plant some 7 feet to 9 feet high and as much across on an open wall (I think a west aspect), and the owner, the late Mr. Fraser, of Comely Bank, told me it was then getting worn out, that it had been there for some years. The plant, however, had been covered with mats in winter, but he doubted if the plant was any better for it. I believe it is the practice to grow this climber in cool greenhouses, but from what I saw and heard there cannot be room for much doubt as to its capabilities for standing out in the more favoured climate of Ireland, the south of England, and some places in the west. At present the plant is in flower with me in a cool greenhouse, and though there are some tempting Water Lilies in tubs near to it in bloom, the glorious flowers of this climber draw first attention. The big Daisy-shaped flowers are each 4 inches across when fully expanded, the points of the ray florets more or less recurved. The colour is even deeper orange than the rich hue of the darkest bitter Seville Orange, there is more scarlet in it, and the shiny character adds brilliancy to the effect. These flowers are produced singly at the points of the new growths, and though not very numerous, the plant keeps gay by reason of the long time the flowers last individually and follow on in succession. The foliage is singular, as implied by the name decurrent, and that to such an extent as to impart a much-winged effect to the stems. Tendrils, long and very wiry, develop from the apex of the leaves, by means of which the plant fastens itself to any suitable medium. So characteristic is the plant, and so very effective are the flowers, that I am sure were the plant tried in some of our most favoured districts it could not fail to reward its cultivator. I feel sure from what I saw that it could be grown in such places out of doors, though I cannot hope to so grow it in Yorkshire.

Woodville, Kirkstall. J. WOOD.

Medinilla magnifica.—Few indoor shrubs are as showy as this—that is, when it is in full flower, which is in many places the case at the present time. It is a bold growing bush, clothed with handsome foliage, while the large racemes of blossoms, which are borne on the point of every branch, are pendulous, thus adding additional grace to the plant. The blossoms and the bracts which accompany them, as well as the flower-stems, are bright pink. An additional feature is that the flowers remain fresh a considerable time. When large specimen plants were more in vogue than they are at the present day this Medinilla was very popular, as it formed a very imposing plant when well flowered. It is a native of the Philippine Islands, and was introduced therefrom in 1848. It needs copious supplies of water during the growing season, but of course less is needed when at rest, for a good deal of the future display of bloom depends upon the thorough ripening of the wood, which is carried out by full exposure to the sunshine, and by giving less water than when growing, but at no time must the plants be allowed to suffer from want of water. This is by far the showiest member of the genus, but a very pretty shrub is M. amabilis, in which the panicles of blossoms are upright instead of drooping, thus presenting a totally different appearance. The little M. Curtisi, with panicles of white blossoms, is also a pretty shrub, and may be grown in less space than is needed for the other two.—H. P.

Pelargonium Miss Louisa Coombs.—In the notice of a few select show Pelargoniums in flower at Mr. Turner's nursery on p. 445 last volume I did not see any mention of the new variety Miss Louisa Coombs, which was, I believe, sent out by Mr. Turner in the spring of the present year. It is of a good, freely-branched habit with ample foliage and very large trusses of flowers. The individual blooms, too, are large and bold. The flowers of this are round, the upper petals maroon, surrounded with bright crimson and edged with rose, while the lower ones are bright rose, the basal portion white, thus forming a white centre to the flower. The edges of the petals are rather undulated, thereby showing a break away from the smooth, unbroken edge of the show varieties. It is undoubtedly a good decorative kind, and partakes more of the character of some of those which are so popular for market work. The feature that militates against these high-class show varieties for general decoration is that it is difficult to get a small plant in a 5-inch pot well furnished to the base, and though the individual blooms are remarkably telling, the trusses are very small, and the plants therefore do not present such masses of bloom as the popular market kinds. Such an objection cannot, however, be urged against this variety.—H. P.

Cobæa scandens variegata.—For houses of tolerably large dimensions this is a very useful climber. It quickly grows into a large specimen, and the effect of a mass of its variegated foliage is very good. It is one of those things that can live healthily and even extend in a root-bound condition. I have seen plants of it running up 20 feet high and covering some square yards with perfect leafage in a 12-inch pot. One great point in its favour is freedom from insect pests, which are generally troublesome to greenhouse climbers.—J. C. B.

Hydrangea Thomas Hogg.—As stated by "R. D.," Hydrangea Thomas Hogg is a noble plant when grown as a large specimen. Some years ago I grew such an one as that described by "R. D.," there being exactly 100 trusses. They were thinned down to this number so as to gain size in the individual trusses. This variety will produce a flowering truss from almost every bud when well ripened. In the formation of large plants the annual growth must be encouraged to form in the full sun. Being wintered in a cool house, these shoots of ripened wood should be tied around the flower-stakes, so as to form the foundation of the future specimen. Neat little plants are formed by inserting cuttings now, or later on in the autumn, after the embryo truss has formed. As soon as rooted the plants must be grown in the full sun in the open air, after being repotted and established in 5-inch pots. I generally place three cuttings in a pot. These, when repotted into 6-inch pots, form nice plants with three heads of bloom.—A. YOUNG.

Crotons in small pots.—One advantage attending the culture of these fine-leaved plants is that they may be grown to comparatively large dimensions in small pots. This is of value in the case of plants that are employed for room decoration and that have to be placed in vases, jardinières, &c. Crotons are among the most free-growing of warm house plants, only requiring a high temperature with abundant atmospheric moisture to induce a healthy leaf development. They demand more warmth and atmospheric moisture than Dracænas and the usual run of warm house fine-leaved things. This is probably the reason why they are not so largely grown as would otherwise be the case. When there is suitable accommodation, however, and neat, bushy, bright-looking plants in small pots are required for room and table decoration, Crotons should be well cared for. We have nothing quite like them among ornamental-leaved plants.—J. C. B.

NOTES FROM HIGHBURY.

ORCHIDS are so largely associated with the name of Highbury and the popular owner, the Right Hon. Joseph Chamberlain, that other phases of gardening often go unnoticed, but because Orchids predominate so largely it must not be understood that general gardening is not given much attention. Plants other than Orchids are largely grown, but instead of endeavouring to fill the houses with numberless species and varieties of plants, large patches of a few kinds, according to season, are grown so as to make each house effective in itself. For instance, there was at the time of my visit one house filled with a splendid batch of Gloxinias in full flower, another was entirely devoted to Pelargoniums, a third to tuberous Begonias, and this same principle is apparent throughout the many houses to be seen. What may be termed the show houses at Highbury are connected by a very long corridor, Orchids, fine-foliaged and flowering plants alternating so as to render them interesting. These houses are replenished from others outside, as well as pits and frames, so as to keep them always gay. Anthuriums, Amaryllids, and Clivias Mr. Chamberlain takes a great interest in, hybridising and seed-raising being closely watched by him throughout the year.

Tea-scented and Hybrid Perpetual Roses are a strong feature, and are well grown both in pots and planted out. The American principle of planting them in shallow beds thickly indoors is under trial, cuttings being rooted and grown on for the purpose, while some are already planted and giving promise of a good return. There is such a demand for cut blooms of these, that sufficient has to be grown in pots to furnish them from the autumn until they can be gathered outdoors, and, judging from the quantities standing outside as I saw them, there should be no difficulty in doing so Chrysanthemums, both for large flowers and decorative bush plants, are represented in large numbers, and their present state bespeaks a very fine display in due course. Large batches of Cyclamens and Primulas were being forwarded in cool pits for early winter flowering, and were already large and enviably luxuriant plants, the Cyclamens being half plunged in cocoa-nut fibre.

In the spacious conservatory attached to the house there towers in the central bed a lofty Chamærops excelsa in fine health and vigour, smaller but vigorous Arecas forming the central plants in smaller groups. The rockwork fernery adjoining is equally interesting, Ferns, Mosses, Palms and other plants revelling in the moist recesses. In this house Anthurium Chamberlainianum is a striking plant. The corridor itself is at all times bright with flowering dwarf and climbing plants growing in the side borders. Here the large specimen Orchids are displayed to their fullest advantage. Sobralias at the time of my visit were magnificent both in the size of plant and quality and quantity of the blooms expanded.

Among the Orchids one of the most noteworthy plants in the collection was Dendrobium thyrsiflorum, which I was told this year carried no less than seventy of its delicate racemes. I have never before seen such strong spikes and vigorous plants of Epidendrum vitellinum or such freely flowered Masdevallias in several varieties as here.

Fruit culture is not so extensively carried out as plant and flower growing, but the best is made of the space devoted to it, and good crops are obtained.

The vegetable garden not being very extensive, the most has to be made of it by close cropping, as the demands from the kitchen are heavy. In the pleasure grounds shrubs and trees have been freely planted in clumps, and this is being carried on round the park boundaries, so as to add colour to the distant landscape. Rhododendrons are a fine show in their season, as these are planted in bold masses. The borders are everywhere filled with flowers, so that in spring the grounds are bright with endless varieties and colours. In some spots, too, they have been thickly planted in the turf with good effect.

At night the conservatories and corridor are all brightly illuminated by electric light, so that visitors are not confined to the house after nightfall, but can inspect the hosts of Orchids and other plants better even than by day, and this without going outdoors. Visitor.

BEGONIAS AT FOREST HILL.

So great are the advances that have been made in the tuberous Begonia within the last decade, that if the most recent kinds were shown beside even the best of those in cultivation ten years ago, some might feel disposed to doubt that so much had been accomplished in so short a time. There are now many growers who make a specialty of this flower, but none have worked longer among them or done more to raise them to their present state of excellence than Messrs. Laing, of Forest Hill. The present display at the Forest Hill nurseries is a grand one, several large houses being entirely filled with fine kinds embracing a wide range of colour in both single and double-flowered varieties. The older forms needed sticks to support the shoots, and the drooping flowers were often half hidden among the leaves, but the best Begonias of to-day are a marked contrast. The development of the flower has not been at the expense of the plant and its constitution, but the possession of a robust habit has been rightly considered as essential as size and distinctness of bloom. Thus we see to-day the finest flowers upon plants with stout self-supporting growth, the shoots short-jointed, the leafage large and luxuriant, and the flowers all disposed so that they can be seen to the best advantage. This applies not merely to the single kinds, but to the double-flowered varieties as well, which by reason of the greater size and weight of their blooms were even more disposed to hang down. Yet without undue shortening of the flower-stem these too have acquired a robustness that enables them to hold up their flowers boldly, and this is a marked characteristic not in a few kinds only, but in the majority of those grown.

The single varieties of the present time have flowers of such great size that any further increase is hardly desired, but new and distinct variations of another character would be welcome and sustain the interest in these flowers. The round form and perfectly regular outline so dear to florists of the old school become monotonous. A distinct break away from this form of flower is seen in a new variety now flowering, and which we hope will have its counterpart in many colours. It has been named Duchess of Fife. It is a lovely kind combining graceful form with fine size and delicate colour. The flowers are rosy-pink, the edges of the petals beautifully and regularly undulated, a most distinct outline which adds to the beauty of the flower. The form of this variety is quite different from that of another rather pretty variation that has lately appeared, namely, a fringed edge to the petals. Laing's Fringed White is the finest of this type, a pure and pretty flower; Grand Duchess of Hesse is a fine kind with large pure white flowers; Mrs. Benson is of a rosy-salmon shade and pretty form, the petals slightly crimpled at their edge; Sunlight has large flowers that are white in the centre, the edge a bright rosy-cerise; and Countess of Brownlow is of a distinct bronzy-orange shade, a rich and telling colour; Britannia, orange buff; Lord Brassey, cerise-red; John Roberts, deep rose; Marchioness of Salisbury, yellow, very good and the largest in its colour, were all conspicuous. Lady Esther Smith has a white centre edged with rose, and Lady Farquhar is a lovely shade of pink, very free flowering. Lady Wantage, pure rose, and the Hon. Mrs. Reid, blush-pink, free and fine, must be mentioned; whilst the Duke of Richmond and Gordon, dark crimson, and Colonel Henderson, of a brighter crimson-scarlet hue, are two noble red kinds. These are a select few of the newest and best single varieties, but many besides were seen well deserving of mention did space permit. The

Double-flowered Kinds

vary greatly in form and colour, the flowers of some varieties being Camellia-shaped, with broad, flat, over-lapping petals, others thick rosettes with outer guard petals, but the majority of those we saw were erect and self-supporting. Among the newest kinds we noted Duchess of Northumberland, with fine bright salmon-coloured flowers; Duchess of York, orange-yellow, the broad petals flushed with soft pink on their edges, free and robust in habit; Prince Adolphus of Teck, deep crimson-scarlet, with a flat-petalled Camellia-like flower, and which received an award of merit at the Drill Hall recently; and Dowager Lady Williams Wynn, of similar shape, erect habit, and rich deep yellow in colour. Laing's Rosebud is a distinctly pretty kind of a blush-pink colour, as refined and choice as a Tea Rose; whilst Countess of Craven, double white, a perfect snowball; Countess of Warwick, salmon-scarlet, large and fine; and Lady Theodora Guest, a distinct shade of apricot-yellow, with prettily fringed petals, are all good. Duke of Fife is a free variety, with large rosy salmon flowers; Lady Dunsany, a charming pink flower; Lady Willmot, light salmon; and W. Clifford, a Camellia-shaped, deep rose kind. Invincible is one of the best bright crimsons that has been raised, whilst the biggest flower is seen in Laing's Triumph, which is deep rose. Majestic, rose; F. W. Soames, scarlet; Marchioness of Downshire, dark crimson; Mrs. Stoddart and Mrs. Regnart, both yellow, and W. A. Richardson, which in colour much resembles the Rose of that name, are all new or recent additions of great merit and beauty.

Clitoria ternatea.—This stove climber was introduced quite early in the last century, yet some five years ago when a coloured plate of it was published in The Garden it was recognised by very few, for, beautiful as the blossoms are, it was almost unknown outside of botanic gardens. One of the exceptions was at Syon House, where Mr. Wythes grew the specimens from which the coloured plate in question was prepared. This Clitoria is a native of the Malayan Archipelago, but it is now generally distributed in many parts of the tropics, where, rambling over bushes or festooning any support within reach, it forms a charming picture. Seeds can be obtained at a cheap rate from most dealers in such things, and if sown in the spring they will grow freely and flower throughout the summer, or frequently well on into the autumn. As a rafter plant for a small stove or for supplying a screen at the end of a glass structure, this Clitoria is well suited. Care must be taken not to overpot it, and frequent syringings are necessary in order to keep the foliage free of red spider, which soon disfigures the leaves. Even though the pots may be rather small, the plants must not be allowed to become stunted, and in order to prevent this as far as possible, they should be liberally supplied with manure water, taking care that it is not too strong, as it is better to use stimulants weak and often than in too concentrated a form. The intense rich indigo-blue of the flowers is most striking. Seedlings vary considerably, but the best forms can be increased by cuttings. There are, however, several well-marked varieties, the flowers differing greatly in colour, for not only are many shades of blue to be found among them, but there is also a form with white blossoms, and another in which the flowers are semi-double. There are several other species of Clitoria, but none of them are in general cultivation.—H. P.

Impatiens auricoma.—This species of Balsam, which was recently introduced from Madagascar and distributed last year, has proved to be most continuous flowering, for the golden-yellow blossoms with a flush of crimson in the centre are borne for a lengthened period. It is also of a free, yet sturdy habit of growth and may already be met with in many gardens. As a garden plant this newer introduction is considerably inferior to the popular Impatiens Sultani, and the individual blooms are also less showy than those of I. Hawkeri, but still, by a judicious selection of seedlings, it may yet be considerably improved. As might be supposed from being a native of Madagascar, it requires stove treatment in this country, though during the summer it will succeed in an intermediate house. I. Hawkeri, of which great things were expected, has never attained the popularity that was predicted for it when new, as it cannot be depended upon to bloom freely, especially in a small state, and the young leaves are very liable to be attacked by a minute form of thrips, which soon injure the plant. I. Hawkeri, as far as I know, has not produced seed in this country.—H. P.

STEPHANOTIS LEAVES TURNING YELLOW.

I will be much obliged if the editor will tell me the reason of the enclosed leaves of my Stephanotis turning yellow. It is a large plant and stretches nearly the whole length of a small stove. It is about four years old and has always been very healthy. At the present moment it is full of flower, but the leaves are gradually becoming yellow, and, though the young shoots look healthy, the blossoms forming on them drop off. It is planted out.—M. M.

*** The leaves of the Stephanotis in question have been examined very closely, but no trace of disease can be detected thereon. Several reasons might be given which would tend to cause the leaves to turn yellow and drop off prematurely. Being planted out, the condition of the border would give rise to it; either the extreme of excessive moisture, or that of drought, would cause it. Is the plant dry under the surface whilst to all appearance moist to the outward eye? If so, that would cause the leaves to drop. Possibly the soil is in a measure impoverished. That too would produce the same effect. If the drainage be not good, the roots would get sickly and the same results follow. Indifferent soil would tend to the same end. The Stephanotis thrives best in about equal parts of good loam and peat, with plenty of sand, which should be made quite firm. The application of an excessive amount of an artificial manure in itself would be sufficient to cause the same ill-effects; weak doses at fairly good intervals during growth would do no harm (say once a week). A low temperature during the past severe winter would cause the Stephanotis to cast its foliage, but if this were the cause it should have happened sooner; lower than 50° is never desirable. Too much exposure to chilling winds, or to the extreme of sunshine after dull weather, would be injurious. The foliage sent did not show any trace of insect pests, being, on the other hand, unusually clean; this, therefore, could scarcely be the cause, unless

a strong dose of any insecticide had been applied or severe sponging been resorted to. Whilst growing, a night temperature of from 65° to 70° at this season would suit this plant well, the syringe being freely employed at least once every day. Should the same thing continue, the stem should be closely examined; an injury thereon might have taken place which is not thus far detected. A rather hard pruning given now would possibly result in a late summer growth, which would flower early next spring. If this were done, a good top-dressing of fresh soil after the removal of any that may be sour or inert would help to renovate the plant.—Grower.

LILIES FOR MARKET.

During the last few years the culture of Lilies for profit has much increased. The most valuable of the family for this purpose are undoubtedly longiflorum and its Bermuda form, Harrisi, and the old white Madonna Lily of cottage gardens. The suitability of the last-mentioned for culture under glass does not seem to have been known to the older generation of gardeners, and probably its merits in this respect might still be unknown were it not for the attention that has been given of late to the other pure white kinds. Of longiflorum it is impossible to speak too highly, and those who took up its culture extensively a few years ago made handsome profits. Like all things grown for the London markets, however, prices through competition have been lowered, but fine blooms of this fair flower still make tolerably good prices, especially in May and early June. I have never seen anything finer than the long houses in some of the London market gardens crowded with plants of this Lily carrying thousands of blooms, their purity enhanced by the deep lustrous green which characterises the foliage when the plants are well grown. L. Harrisi is very valuable on account of its early blooming nature, which enables market growers to obtain a supply of blooms quite early in the season and when higher prices can be made. This Lily was to have bloomed twice in the season, but the second crop of flowers is too scanty and too late to be of much value, and the bulbs do not retain this perpetual blooming character in this country. I know of one London grower who worked up a large stock of plants from scales, but when they came to flowering size the blooms did not differ to any great extent from those of the old longiflorum either in form or manner and time of opening. Therefore those who wish to secure a crop of very early blooms would be wise to procure good imported bulbs as soon as they come to hand. Those who supply the London markets lose no time in potting the bulbs They are generally grown two or three bulbs in a 7-inch pot, the compost consisting of good turfy loam, space being allowed for top-dressing later on. The old white Lily has to be potted during its short resting period. Early in autumn the young leaves appear, and before that time the roots should be working in the new compost. It is found, however, that the best results are obtained from bulbs that have been a year undisturbed. They start with greater freedom, and the flower-spikes are stronger than in the case of bulbs that have remained some weeks out of the soil. This Lily will take liberal doses of liquid manure when in full growth; indeed, in the case of plants that are grown for cut blooms and that have filled the compost with active fibres, liberal feeding is absolutely necessary. I have known bulbs to remain undisturbed without change of soil for several years and annually yield a profitable crop of flowers. One advantage of growing them in this way is that they do not get the disease that works so much havoc in the open air. The flowers are utilised in various ways, some being cut as they expand, these being employed for wreaths, crosses, &c. For other floral decorations, and especially for churches, the whole stem is cut, while a great many plants are sold in the pots. J. C. B.

NOTES OF THE WEEK.

Prunella grandiflora is a good variety that quite bears out the name, for its flowers are very fine at Kew, where a little group looks pretty in the rock garden. The flowers, borne in a long, thick head, are of a rose colour with purple bracts.

Gladiolus dracocephalus, a Cape species from Natal, is now flowering at Kew. It has tall spikes about 5 feet in height; these bear many flowers of a bronzy yellow colour, curiously mottled and spotted inside and out with a dull red. It is a very distinct species, of graceful aspect, but needs close inspection to see its quaint colour.

Bravoa geminiflora is a pretty Mexican bulb now flowering at Kew in a frame. It has slender scapes, each about 2 feet in height, these bearing numbers of long drooping bells of a distinct coral-red colour. It is a free-blooming plant under congenial conditions, as there are nearly two dozen spikes of flowers from one little clump of bulbs.

The common Chicory is rarely seen in the garden, and yet we know of no lovelier hardy flower. It is worthy of a little trouble to naturalise it, especially as once this is accomplished it will take care of itself. The other day we stood beside a magnificent plant that was over 6 feet high, and the hundreds of lovely blue blossoms freshly expanded and glowing in the morning sun had a fine effect.

Scabiosa caucasica is one of the very best hardy flowers in a soil that suits it, blooming continuously for months. On several occasions during the past few weeks we have noticed a splendid plant of it in the herbaceous ground at Kew, showing that a light free soil is essential to its well-doing. The flowers of the Kew plant are very fine. Both this and its lovely white form are very effective where they do well.

Œnothera speciosa.—This is a neglected plant of great beauty, truly perennial and blooming abundantly over a long period. It seems very happy in this season of sunshine, as even in the light soil at Kew a mass of it is covered with flowers. Their effect is charming in the bright sun, as they are almost transparent and of the purest white, shading prettily into cream at their base. It grows little more than a foot high, and makes a beautiful group.

Lilium Grayi.—This new and beautiful Lily has been flowering well at Kew, some of the strongest shoots being about 4 feet high and bearing seven of the handsome flowers. It is allied to L. canadense, having similar drooping bell-shaped flowers in whorls, but the flowers are smaller, less expanded, and but slightly reflexed at the tips of the petals. They are of a deep rich crimson-red colour, profusely spotted inside with purple-brown.

Laurus nobilis as a tree.—Though everyone who knows anything about trees and shrubs will at once recognise that I am writing about the Bay tree, can anyone send you, as I do now, a photograph of it in tree form? We all know it as a bush, but I cannot remember to have ever seen it before as a tree. It is growing in this village. The garden in which it is growing is close to a road. The plant is about 26 feet high.—W. T., *Bishopsteignton*.

Lathyrus tuberosus is an uncommon perennial Pea, which in colour resembles L. latifolius. It is equally free-flowering, but has smaller blooms and thinner growth. There is a group of it in the herbaceous grounds at Kew, and at Knap Hill recently we saw a lot of it that springs up annually among the stones of a paved pathway and flowers as well as if it were under cultivation. It could easily be naturalised in a pretty way.

Verbascum Chaixi.—It is curious how some of the finest garden flowers are neglected and only seen in a few places. This noble perennial Mullein has been in the country long enough for everyone to have it if they wished to, and yet it is the exception to meet with it. In the rock garden at Kew and in the herbaceous grounds there are some splendid plants now in flower, the finest of them over 6 feet in height, quite half of the plant a perfect column adorned with myriads of blossoms.

Hymenocallis (Ismene) Amancaes.—A clump of this is now flowering well at Kew in the frame devoted to half-hardy bulbs. It is a very handsome Peruvian plant allied to and resembling the Pancratiums. There are four strong flower-scapes rising out of a mass of large deep green leaves, each bearing several blooms which open in succession. They are larger in the tube and have broader petals than those of the Pancratium, of a rich cream colour when first open, passing to white, whilst they have a delightful scent.

Senecio macrophyllus.—This giant Groundsel is a striking plant, and a mass of it at Kew arrests attention both by the luxuriance of leaf growth and the bright effect of the tall spikes of flowers. To grow in groups along with other strong herbaceous plants, such as the Inulas, Telekias and Sunflowers, it well deserves attention. Its immense broad spathulate leaves are each nearly a yard long, and the flower-spikes rise erect to 6 feet, the upper portion a dense club like mass of bright yellow flowers.

Magnolia glauca, which we recently noted as flowering at Knap Hill, is also in bloom at Kew, where two flourishing specimens may be seen isolated on the Grass. In the bright sunshine they are seen to advantage, with the strong light reflected from their polished leaves, a gentle breeze displaying their silvery under surfaces. Although the flowers are not so large and showy as those of the earlier kinds, they are very pretty and their delicious fragrance is quite perceptible in the air around the plants.

The Kentish Strawberry crop has been extraordinarily heavy, and the picking is still at its height. Reports from the Maidstone, Sandwich and Swanley districts agree that the crop is about double the average. From Sandwich alone upwards of 100 tons were despatched last week. There is a great increase in the acreage under Strawberries this year as compared with last, and cultivation is increasing in a remarkable way. The satisfactory feature is that their cultivation is likely to be paying to the farmer, as the demand for the fruit increases also.

Robinia Pseudacacia semperflorens.—The False Acacia in its several forms is a beautiful tree, and one of the best of them is the variety which bears the above name. At present few seem to plant it, and doubts have been expressed as to the constancy of this characteristic, but it is maintained. Long after all other False Acacias have ceased flowering this one continues producing a raceme of flowers at every joint of the growing shoots. In Mr. Waterer's nursery we noticed that even young trees were flowering apparently at an earlier age than those of the type itself.

Coreopsis (Leptosyne) maritima is a handsome annual species, which we noted at Kew. The genus Leptosyne is now included under Coreopsis, and embraces the Western American representatives of the Coreopsis family. This under notice is a Californian kind and apparently an annual worthy of more attention. The plant grows about 1 foot high, its leaves being finely cut into numerous grass-like segments. The flowers, entirely yellow both in the disc and rays, which number about twenty, are as large as those of Chrysanthemum maximum and borne singly on strong stalks over a foot in length, so that they are well adapted for cutting.

Lilium Lowi and L. Bakerianum.—These two Burmese Lilies are now flowering in Mr. Ware's nursery at Tottenham. L. Lowi is of recent introduction and a charming addition to the Lily family. It has drooping, funnel-shaped white flowers, the tips of the segments reflexing, the inner part of the tube abundantly spotted

with purple. A coloured plate of this Lily appeared in THE GARDEN of March 17, 1894. L. Bakerianum, although not exactly new, is rare in cultivation. It is apparently nearly allied to L. Lowi, but the flowers we saw were even more spotted inside, and a band of a distinct rosy shade runs down the centre of the petals externally.

Genista ætnensis. — This graceful south European Broom appears to have stood the past winter very well, and large spreading bushes of it nearly 12 feet high and laden with flowers are effective in some of the shrub groups at Kew. It might be called a miniature Spanish Broom, not as regards stature, but it has Rush-like twigs like the Spartium, only they are much more slender, and the rich yellow flowers, though smaller, more than make up in effect for what they lack in size. As a shrub for light, hot soils much might be said in its favour. One only needs to see it as at Kew to be at once favourably impressed with its beauty. A coloured plate, which shows well its beauty and free blooming character, appeared in THE GARDEN of March 18, 1893.

Rosa polyantha is now, and has been for the last fortnight, a pretty feature. In any aspect it looks happy, whether on dry or moist banks. Growing against low trees, sending its long shoots, covered with innumerable heads of white bloom and the richest of green foliage, up into their branches and arching over to the ground, the effect is very fine. On the banks of the lake, too, the snowy branches touching the water, with the reflection below it, is very beautiful. For any open space in the shrubbery, for covering a fence, or forming banks to shelter tender subjects, it is one of the best wild Roses. All that it requires is to have plenty of room to develop and show its graceful character and to be left alone.—M. J.

Lælia elegans (Woodlands variety). — This superb variety is now in bloom in the Woodlands collection of Mr. Measures. Lælias are a special feature here, as Orchid growers well know, and this variety is one of the most beautiful of all the forms of L. elegans. A distinctive point is that the two upper lobes of the lip are of abnormally large size, the sepals and petals being French white and quite glistening in aspect, while the margin of the former is without any undulation, unlike the petals. The lip is unique for boldness and rich crimson in colour, which extends over the whole of the outer surface of the upper lobes, running in a band down to the ovary, the remaining portion being white on both surfaces. It is delicately fringed, also heavily fluted. The column is large and rosy pink in colour.

Lilium odorum.—This noble Lily is now flowering grandly at Kew. There are two round beds of it behind the Palm house, and visitors to Kew within the next week should make a point of seeing it. The plants are healthy and robust, the strong stems terminated by, in most cases, two immense flowers disposed opposite to each other. They are quite as beautiful as those of the popular L. auratum, without the overpowering odour of that species. They are sweetly fragrant. The tube of the flower is of the purest creamy white, without spot or stain, but the exterior of the flower is stained with a deep chocolate hue. We noticed two immense flowers caused by the fusion of two blooms on one stem. They retain their single form, but have double the usual number of petals and anthers, and two stigmas also. It is a most striking and handsome Lily.

Gunton Park, Lord Suffield, and Waterloo Strawberries.—I herewith send you a few fruits of the above-named Strawberries. I consider Gunton Park the best all-round variety in cultivation. Lord Suffield is a little later in ripening and forms a good succession. It is a capital cropper, the fruit being of exceptionally rich flavour and of a very dark mahogany colour. These, coupled with Empress of India, form the most valuable Strawberry trio introduced of recent years. Waterloo is most useful where it succeeds, but it is somewhat capricious and never makes large plants. It does well on our rather light soil, well mulched in autumn. One of its best points is its non-liability to rot in rainy weather. If grown in porous soil on a north border it is useful for late work. I consider its flavour pretty good and the colour is very taking. —J. CRAWFORD, *Coddington Hall, Newark.*

Brodiæas at Colchester.—Among the choice and little-grown bulbs that merit more popularity are these. They are grown well in Messrs. Wallace's nursery at Colchester. Some of the earlier species were over at the time of our visit, but two or three distinct varieties were still fresh and abundant. B. peduncularis was one, and is most graceful. It has a large umbel of flowers borne on an erect stem, each flower on a long slender stalk, making the heads quite 1 foot in diameter. The flowers almost exactly resembling those of Triteleia uniflora are white, with a distinct violet line down the centre of the petals outside; a mass of it is most elegant. B. rosea is a new species of quite a distinct shade, having a neat umbel of light pink flowers on a dwarf erect stem. The old B. volubilis is quite a unique twining plant, that reverses the usual order of things in having climbing flower-stems, which, entwined around Bamboo canes, were here quite 5 feet in length and terminated by large umbels of beautiful deep rose-coloured flowers.

Hemerocallis aurantiaca.—This is a very notable addition to our hardy garden flowers and merited the first-class certificate that was granted to it at the meeting last Tuesday. It was shown by Messrs. R. Wallace and Co., of Colchester, who have introduced many good flowers, but certainly none finer than this, because it is a plant that everybody can grow and we feel sure will want to have when it is distributed. All the Day Lilies are characterised by robustness, and this essential merit is accentuated in the variety under notice. In appearance, vigorous growth and form of flower it partakes most of the character of H. disticha, and we might almost hazard an opinion that it is a deep golden seedling of this species. It originated in Japan, where it was first noticed growing in a mass of Iris Kæmpferi. Its leaves are broad and slightly glaucous, the flowers numerous on a very strong scape, and of extra stout substance, the petals being quite fleshy. It most resembles H. disticha in its large, widely expanded flower, the broad petals distinctly recurved at their tips, but in its rich shade of apricot-yellow it stands out conspicuously as a most distinct, beautiful, and highly coloured form.

Lilium giganteum.—This fine Lily is flowering now in the Bamboo garden at Kew. It is 8 feet high and bears about a dozen blooms, the stem being a couple of inches in diameter near the ground. A native of the Himalayas, and introduced over forty years ago, it has never become very common in cultivation. This is owing to its not succeeding well in many parts of the country and to the bulb dying after it has flowered once. The flowers are about 8 inches long and 4 inches to 5 inches across the slightly recurved segments. They are white inside, tinged with reddish purple, and greenish yellow on the outside. The large cordate leaves are a feature in themselves, those at the base having a blade 15 inches in length, and borne on a petiole nearly as long. These large leaf-stalks are one of the most distinguishing features of this Lily; in fact, the leaves differ from those of all other Lilies not only in this character, but in their size, shape, and reticulated venation. On the stems of flowering plants they become smaller towards the top until they are finally reduced to mere bracts. The noble habit of the plant with its imposing crown of flowers makes one wish it were to be seen oftener. It should be planted in a rich loam and be mulched during the summer. The only other Lily closely related to this is L. cordifolium, a Japanese species or, according to some authorities, a variety of giganteum. It is a smaller plant, and of not the same value horticulturally.

FERNS.

RAISING FERNS FROM SEED.

IN reply to "W. H. M.," Warrington, the most natural as also the quickest way of propagating Ferns is by means of their spores or seeds. These should be gathered when the capsules containing them begin to assume a brownish colour; the fronds should then be cut, put into paper bags and allowed to dry for two or three days, after which time the spores should be sown as soon as possible, although most of them retain their vitality for a considerable time. Although Ferns may be sown at any season of the year, the early spring is the most favourable time, as if properly treated, seedlings, or the generality of them, raised then have sufficient time to produce crowns strong enough to stand the following winter. Many ingenious ways of sowing Fern spores have been recommended, such as sowing on prepared flannel, &c., but, provided the materials used be of pure quality, either a piece of turfy loam, a piece of fibrous peat, or sometimes a mixture of both roughly broken and perfectly free from decomposition of organic matter is all that is required. An excellent way of getting rid of vegetable or animal life in the material used for sowing consists in gently pouring the contents of a kettleful of boiling water over it. When the soil thus treated has been allowed to cool and drain it is ready for use, as eggs or larvæ of insects, spores of fungi, &c., are or should be all destroyed. The Fern spores which are exceedingly minute must be scattered on the surface of the prepared soil and covered with either a bell-glass or a sheet of glass and kept in a close shady place under a handlight if possible, but this is not absolutely necessary. There they should remain until the surface of the pots or pans which contain them becomes covered with a growth of Lichen or Liverwort appearance. From this singular growth the young Ferns ultimately develop, according to the different species, in a space of time usually varying from three to six months from the time of sowing. During that time the pots or pans in which the spores are sown should be kept in a uniform state of moisture, the watering should be done by partial immersion by standing the pots or pans in water for a few inches, so that the moisture rises to the surface. When Fern spores germinate freely, it is necessary that they should be several times divided, for if allowed to crowd and overgrow each other in the seed pan or pot they are very liable to damp off. They should still be watered by partial immersion and no water should be applied overhead until they have produced fronds. They should be gradually inured to the air by tilting on one side the glass cover, which may in a short time be removed altogether. Until then it is best to keep the pots or pans at all times well shaded during sunshine, but not in dull weather. When fronds have made their appearance, the seedlings do not require any other shading than that to which the house is usually subjected. When the seedlings have formed a little crown and are provided with two or three fronds, they should be potted singly or placed in pans or boxes and kept for a time in a somewhat close atmosphere, well shaded and carefully watered until established. Greenhouse and stove Ferns require to be sown in a warm house; whereas for British and hardy exotic kinds a damp, shady, but not dark corner under the stage of a greenhouse or cold frame is all that is required. S. G.

Orchard and Fruit Garden.

WHITE BLACKBERRY ICEBERG.

This new Blackberry was raised by Mr. L. Burbank, of Santa Rosa, California, by crossing a variety named the Old Crystal White with Lawton, which in America is considered the most productive Blackberry known. The berries of Iceberg, as may be seen from the engraving herewith, are large and freely produced. They are said to be delicious in flavour and so transparent, that the seeds, which are remarkably small, may be seen in the berries when ripe. The clusters of fruit are said to be very large and as firm of those of Lawton. We understand that this variety will be put into commerce by Messrs. Pitcher and Manda, of Short Hills, New Jersey.



White Blackberry Iceberg. Engraved for The Garden *from a photograph sent by Mr. Luther Burbank, Santa Rosa, California.*

Strawberry British Queen.—In Mr. McIndoe's fine collection of ten dishes of fruit at York was a good dish of British Queen . Strawberry grown in pots, and, of course, quite cool. It was quite a treat to see this old kind in good form, as one so seldom meets with it now-a-days. Mr. McIndoe informed me that he had grown it in pots for late work for many years. The one fault with British Queen, and one which seems not to be easily mastered, is its obstinacy in colouring to the point. In Empress of India, one of Mr. Allen's new seedlings, however, this difficulty is overcome, as it colours well throughout, and is, moreover, quite equal to, and, in the opinion of some, superior to British Queen. All who esteem high-class quality should grow Empress of India. —J. C.

Summer-pruning fruit trees.—Mr. Iggulden's interesting notes on mutilating fruit trees remind me of the fact that even those who use the knife in a practical manner often summer-prune their wall trees far too soon. For the sake of neatness they cut back all breast wood perhaps by the middle of June; consequently another free growth follows, the back eyes breaking into growth also on account of being so soft and green. No wonder then that their trees are poorly furnished with fruitful spurs and remain comparatively barren. Late summer pruning is, of course, more necessary in midland and northern localities, but I am convinced from personal observation that even in the southern counties the work is done in very many instances far too early. I myself do not take off the wood until July is getting well advanced.—J. Crawford.

Strawberry Royal Sovereign.—I am glad to see that "W." (p. 463) is of one mind with me as to the value of Royal Sovereign. In my first note on this variety (p. 262) I mentioned that as a forcing Strawberry it had proved earlier and a heavier bearer than Noble. I have been unable as yet to give it a fair trial out of doors under the same conditions as Noble, and I am therefore not in a position to state how it will compare, in this locality, with the latter variety as to earliness in the open. I note, however, that Mr. G. Wythes (p. 441) and "W." have both found it to be rather later than Noble. That Noble is a paying Strawberry there can be no two opinions, the fruits being full-sized, firm, and of splendid colour, while during this dry June they have certainly been far from flavourless, and as a good and early variety for the market this Strawberry is at present without a rival, but I shall not be surprised if, in the future, Royal Sovereign proves itself even more valuable, though I think that the Strawberry which ousts Noble will have to be possessed of many good qualities. The old Sir Joseph Paxton is still a favourite in this neighbourhood, and has, as usual, borne well, though perhaps not quite so heavily as Noble. John Ruskin has been poor both under glass and in the open, and will not be grown again. Competitor has produced marvellous fruits, there being no difficulty in finding eight berries to make up a 1 lb. punnet. There seems to be much diversity of opinion as to the flavour of this Strawberry, some, amongst whom I must include myself, finding it insipid, while others prefer it to varieties possessing a more decided taste. Waterloo, with its dark, almost black colour, has not an attractive appearance, but it has the merit of a particularly pleasing flavour and is a favourite with many for this reason. Latest of All has been more affected by the drought than any of the earlier varieties, as at the time the berries commenced swelling the ground was at its driest, and no just criterion can therefore be formed of its comparative value in an ordinarily moist season.—S. W. F., *Torquay.*

—— This new variety secured the first prize in the single dish class at York show, and was a truly imposing dish, the fruit being large and brilliantly coloured. Although I much prefer the deep mahogany colour as found in the Gunton seedlings, I shall certainly grow Royal Sovereign, as many gardeners at York spoke very highly of it from every point of view. From its firm appearance I should say it is a capital traveller, which is a great point in favour of any Strawberry now-a-days when so much packing and consigning to a distance both by rail and parcel post have to be done.—N.

A NOVEL MODE OF PRUNING BLACK CURRANTS.

In judging cottage gardens in Essex the other day I came upon a lad sitting on the ground picking the Currants off a bough that had been broken off by accident. Remarking on this comfortable method of picking Black Currants on a hot day, my fellow-judge said that he had improved on that simple plan for years. He prunes his Black Currants so soon as the fruit is ripe, and carefully removes the fruiting branches to a clean packing shed or potting bench, where the fruit is picked under cover in cleanliness and comfort. The major portion or whole of the fruiting branches are then removed annually, the Black Currant bushes being pruned back to the young wood. The wood, being thus fully exposed in July, ripens thoroughly before the end of the season and produces full crops of the finest fruits. Of course, for this mode of culture the single-stem style of training is abolished in favour of the production of few or many suckers —from six to a dozen. The bearing wood and bushes to a great extent thus become annuals, and renew their youth as well as their vigour every year.

I have not hitherto adopted the early annual cutting back of my fellow juror. My experience, however, in regard to the wisdom of renewing Black Currants from suckers entirely agrees with his. His earlier and more severe pruning is also altogether in favour of the improved strength and fertility of the young wood

from base to summit, and his samples are mostly all alike good—a great point in dry seasons like the present. It is no exaggeration to affirm that nine-tenths of the Black Currants met with this year on bushes grown on the old crowded system are of no commercial value, the major bulk consisting of dry hard flesh, the skins being nearly as tough as an old shoe. But notwithstanding the persistent drought, the fruit on last year's shoots, where these have been fairly fed without overcrowding, is of average size and full of juice. And yet how many go on crowding Black Currants with old wood, cutting back the best of the young shoots into close spurs—a mere wanton waste of vital force and useful fruit. D. T. F.

NEW STRAWBERRY BEDS.

ALTHOUGH some time will elapse before actual planting of the freshly layered stock for next year's fruiting takes place, many will have already selected the plot, if not prepared it, for their reception. Early preparation of Strawberry ground is of much importance, as then a natural settlement of the same takes place before planting, and that a firm root-run is essential to their well-being has been proved over and over again. Put out two batches of plants, the one on fairly solid ground, the other on ground quite freshly trenched or even dug, and should the autumn prove dry it will soon be apparent which suits them best, and that, too, in spite of all the treading which may be given at planting time. True, ground cannot always be cleared of other crops soon enough to allow of this early preparation, but where practicable it should always be done, even if only a fortnight beforehand. When living under that veteran Strawberry grower, Mr. Allen, of Gunton, I became convinced of the necessity of giving a firm root-run to young Strawberry plants from the success he had from the practice. His plan was to select a plot of ground in spring. This was trenched one spit deep, a good quantity of rich manure being dug in at the same time. The garden roller was then put over it, and in due time the main crop of spring Onions sown in rows 2½ feet apart. The frequent trampling of the ground to attend to the crop during the summer rendered it very firm and solid, and in August the young Strawberries which had been layered from the previous year's planted bed were planted out 2½ feet apart between the rows of Onions, the soil being well rammed in round the balls. This he did every year, and finer fruit than was produced from these beds I never saw. So much then for a firm root-run. Now, in regard to trenching, I am opposed to the two-spit system as practised by many, especially if the plants are to be destroyed after the second year's fruiting. The Strawberry is to a great extent a surface-rooting subject, and in my opinion the roots do not during the first year, when we expect the largest and best fruit, reach the manure thus deeply buried. What I prefer is to take one spit and the crumbs and to tread the manure in the bottom. The young plants then get the benefit of it as soon as in active growth, fine fruit is produced the first season, and a heavy mulching of pig manure applied in November or December—the same being long, but thoroughly saturated with the urine, fortifies the plants against the strain of the second year's crop, after which they are destroyed. The reason why so many Strawberry beds on light warm soils collapse during hot dry seasons is that autumn mulching is neglected, a little littery material being put round the plants just as they are coming into bloom, by which time often three parts of the moisture has escaped from the soil. In such cases early and good runners cannot be obtained, as the parent plants are invariably badly affected by spider. In planting young beds I always give a cube of good sound loam, ramming it well in round the balls and mulch with spent Mushroom manure or even leaf-mould to the distance of a foot round each plant, and if the autumn proves dry give a couple of waterings with farmyard liquid at an interval of a fortnight after growth becomes vigorous. In many large places where the demand for pot and open-air bed plants is great, many runners are annually taken from two-year-old beds. This is a two-fold evil, the stock in the first place being weakly and smothered by the foliage of old plants, and trampling amongst the rows being a great nuisance. If those who have room would utilise the ground by the margins of walks and in front of espalier trees for growing runners for stock, keeping all the bloom pinched off, they would find it an advantage in every way. Some of the old Strawberry growers, Mr. Coleman, of Eastnor Castle, for instance, used to devote a separate open sunny quarter of good ground each year to young plants for producing runners, allowing them to stand one year only and keeping the bloom pinched off. This may by some be thought extravagant, but were I in a position to do so I would adopt the plan myself, as I am confident it would pay in the end. When stock plants are grown by the margins of walks I see no reason why the young plants should not be layered into the fruiting pots at once instead of into small ones; the too common evil of the plant becoming root-bound before potting is accomplished is thus avoided. Planting before this root-bound condition is reached is one of the main points in good open-air culture. If the young plants are at all infested with spider I lay them on their sides and well syringe with sulphur water. This will cleanse them and secure a healthy growth. J. CRAWFORD.

Apple Earl Morrin.—This capital cooking Apple was inadvertently called Earl in the note on it in THE GARDEN June 15. It is mentioned in various trade catalogues, but is not, I think, generally known, which it certainly ought to be.—J. C.

Beetles eating Strawberries.—Strawberry growers often have to complain of the great amount of damage and loss sustained by slugs. This year, owing to the dry weather, these pests have been less numerous than usual, but another enemy in the form of a small black beetle is doing much mischief in some districts, eating holes through many of the finest fruit and damaging others. One can guard against slugs to a certain extent by liming round the base of the plants before mulching, but the beetles travel from a distance, and are not, therefore, so easily kept at bay; indeed, I know of no effectual trap for these pests, and should be glad to learn if other gardeners have discovered one.—C. H. N.

Grape Duke of Buccleuch.—Last season I grafted Duke of Buccleuch on to Golden Queen stock, and have this season one bunch on the rod. I am in hopes that the union will prove a happy one, as although there are certainly one or two spotted berries in the bunch the majority of them are clear and of large size, also colouring early and well. I shall hope to report further on the Vine next year. The Duke is more often than not found in a ragged and unsatisfactory condition, owing to the well-known spot that affects the berries, but it is just possible that Golden Queen, which has been proved to be a good stock for many capricious varieties, may be suitable for the Duke; at any rate I have good reason to hope so from the appearance of the bunch in question.—N. N.

Early Peaches.—It is remarkable how soils alter the size of fruits, as at p. 461 Mr. Markham says Amsden June did not grow so large as Waterloo or Alexander, and did not crop so well as the two named, but he thought the flesh was sweeter. Here Amsden June is quite the reverse; in fact, I have discarded Alexander on account of its being smaller and not so good as Amsden June. As most fruit growers know, soils have much to do with the size and quality of fruit. My soil is lighter, I fancy, than Mr. Markham's, but it is not considered nearly so good as the Kent land for fruit. I am almost inclined to think the Amsden June is not always true to name, as under glass with me it is a remarkable cropper, the fruits fine, and very early. Again, much depends upon the stock upon which the trees are worked and, of course, the culture given. I think it was "J. C." who advised me to plant Amsden June on the open walls, and certainly I have had no reason to regret doing so, as trees after having been planted nine months gave fine fruits and of good quality. Though last year was a poor Peach season in the open, this was the first Peach ripe. The trees promise well this year, being very healthy and making a lot of good wood. I can, like "J. C.," speak as to the good qualities of Early York for open walls. It has done well with me. It is useless to expect these American Peaches to grow alike in districts totally different as regards soil and situation. It cannot be denied that the early American kinds are a great gain, as they give us fruits in the open so much in advance of the older kinds, and though inferior in flavour, the first Peaches from the open are too useful to make us complain much.—G. WYTHES.

BLISTER ON VINE LEAVES.

ANY criticism by "D. T. F." is most acceptable, because always rendered in a kindly, courteous manner. No doubt deep root action does contribute towards blister, owing to the flimsiness of the foliage formed under such conditions, but I still think faulty ventilation principally to blame. What "D. T. F." says concerning the risks attending the practice of leaving or keeping up a little heat in the hot-water pipes is to the point, and worthy of close attention. I very well know there is a certain amount of risk attending the practice, as I have frequently been greatly vexed to find the pipes too hot when the sun-heat had also risen considerably. They would not cool, and red spider was perhaps the outcome of one or two such blunders. When, however, fire-heat is wholly dispensed with in warm, clear weather there is an even worse evil to be reckoned with; at any rate, in the more moist western counties, and probably to a certain extent in the drier eastern counties, where "D. T. F." has practised so long and so successfully. I refer to scorching of the leaves and scalding of the berries. Both occurrences are due to faulty ventilation and false economy as regards fire-heat. After a clear, hot day the maintenance of a comparatively low night temperature results in the condensation or deposition of moisture on the leaves, all the edges of these being prettily fringed with dewdrops. This may appear satisfactory enough, and to a certain extent it is so, but when this moisture is evaporated too quickly, scorching of very many of the leaves is almost inevitable. Gros Maroc is peculiarly liable to this form of scorching, and Black Alicante, Black Hamburgh, and, in fact, all other varieties, are more or less liable to suffer from it. It is at the coldest ends and where also the sunshine first strikes that most leaves are scorched, and very early ventilation, without fire-heat, will not always meet the case. Disfigurment of leaves is annoying enough, but wholesale scalding of the berries is at times even more so. This latter is brought about in much the same way as scorching of the leaves. The berries, always cool, appear to become ice cold during the night in unheated houses, and a slight rise in the temperature, even if air is given quite early, ends in the deposition of moisture on the berries, rapid evaporation, brought about by sunshine, resulting in the scalding of a few or many berries. That, I believe, is the correct theory, and for which I am not responsible, but am a believer in. The

remedy in both cases, then, is the maintenance of gentle heat in the hot-water pipes. On dull mornings if there is no heat turned on, a burst of sunshine may raise the temperature in a house very rapidly and the berries be dewed over before it is possible to prevent it without the aid of fire-heat. In low positions there is particular need of great care and a freer use of fire-heat, or otherwise it will be impossible to keep up a circulation of dry air. Am I right or wrong, therefore, in advising the maintenance of a "little heat" in the hot-water pipes? There ought certainly to be no reckless stoking in connection with Grape growing, and no very great judgment is needed to keep the heat down to a reasonable extent.

W. I.

Fig White Marseilles.—Has any reader of The Garden found this Fig to be subject to a spot in the leaf which when it once sets in increases rapidly? I have this Fig growing in tubs both in a warm and quite cool house, and this defect is seen annually. It does not appear until the leaves are well developed, after which they soon look as if they had been syringed with hot water. Had this defect shown itself only in one house and temperature, I could have believed it to have been due to some cultural error, but I am now inclined to the belief that it is constitutional. Perhaps some reader or Mr. Wythes will give their experience with this Fig. I like the flavour of White Marseilles, it being sweet and refreshing and of fair size.—J. Crawford.

Plums.—These are fruiting freely and making a strong growth, but white fly is troublesome, and unless well syringed the growth will be checked. Such insecticides as often advised and repeated hosing will be beneficial, and on dry soils a good mulch will do much to promote a healthy growth and ward off the aphis. Much useless growth may now be removed and will to a certain extent rid the trees of the fly. In nailing these or any other wall trees at this season, it should be borne in mind the work is only temporary, and it is not advisable to use more nails than is necessary. Often small sticks and matting twisted or strong raffia will keep the intermediate shoots in position, thus saving nails and doing the work more quickly. Pyramid trees or bushes in the open should, if possible, be given a mulch and will well repay copious supplies of moisture or liquid manure. Large trees often drop their fruits when stoning if the roots are parched.—G. W.

Flower Garden.

A BASKET OF DORONICUMS.

A very simple, but effective arrangement of flowers is shown in the annexed illustration. It consists of a light basket loosely filled with Doronicums (Harpur-Crewe) and the old-fashioned Ribbon Grass, with the addition of a single leaf of the Moutan Pæony. Flowers thus arranged are not only much more beautiful than when many sorts are crowded together, but they last longer, and when they are much in demand the supply goes much farther, a point of some importance in many gardens.



A basket of Doronicums arranged by Miss Jane Hodges. From a photograph by Mr. Greenwood Pim, Dublin.

G. Pim.

Double Daisies and Hepaticas.—In southern localities the heat and drought are telling sadly on these plants, and on the Daisies especially. The shoots of the Daisy elongate, and they become bare of leaves towards the heart of the plants, letting in the heat to the main roots and bringing them into a debilitated state. The best thing to be done is to give a good root watering and then top-dress with some good soil, which will cause the side shoots to put forth roots into it, and create a valuable young stock for autumn planting; or the plants may be taken up, pulled to pieces, and the young shoots planted out in a prepared bed in a moist and shaded spot, the plants kept well watered, and have a top-dressing or two. Hepaticas, which are apt in dry weather to lose their foliage early, are also helped by surface dressings after a good watering in the case of plants exposed to the sun. Division of Hepaticas should be done during a moist time in September.—R. D.

IRIS KÆMPFERI AT WISLEY.

Seven thousand plants of this noble Iris need nothing more than a change of weather to yield the full measure of their beauty. The large well-established clumps have, however, come through the long period of heat and drought very well, and have thrown up flowering stems crowned with blooms, which, as regards form, colour, size, and substance, leave little or nothing to be desired. Smaller plants that have not had time to get a full grasp of the soil naturally suffer, for there are few hardy flowers that demand so much moisture in the growing time as Kæmpfer's Iris. A copious rainfall would, however, put everything right and would ensure a bounteous harvest of bloom. The greater portion of the plants at Wisley are seedlings raised on the place, and there are yet thousands of young ones in the seedling beds only requiring a season or two to bring them into a bloom-bearing condition. There is ample opportunity to realise the decorative value of this Iris at Wisley, and certainly where it grows freely for some years it is one of the most effective hardy flowers we have. I do not wonder that Mr. Wilson has taken up its culture on so large a scale, for in grace of growth, nobility of aspect, and capacity for creating effect no other member of this large family can equal it. Some of your readers may not have formed so high an estimate of this species, but it must be borne in mind that the true value of any garden flower can only be correctly estimated when it is seen in really good form. There is a vast difference between plants that merely live on from year to year and such as thrive sufficiently to show their native vigour.

There is one little garden picture at Oakwood which I should like to describe, as it owes so much of its charm to this fine Iris, and illustrates what is probably the best way of cultivating it. In the foreground is a sheet of water, bordered on one side by a dense growth of our native yellow Lysimachia, with here and there an Iris backed up by the dense, intensely green foliage of the Alder. In other directions the gently shelving banks are freely dotted with Iris clumps, behind which rise somewhat steep mounds tenanted by dwarf hardy things and topped with flowering shrubs. Looking over the water, one sees the white and richly tinted blooms rising boldly from the green leafage, and rendered more conspicuous by the background of rockwork and bright masses of the little Cheddar Pink, white Thyme and other similar things. Photography could not do justice to this; it requires the painter's brush.

The water margin is undoubtedly the right place for Iris Kæmpferi, for even in a time of drought there will always be a certain amount of moisture working up to the roots. In another part of the garden strong specimens fringe the margin of the pond where aquatics find their home, and the effect is equally good. Such a quantity of plants naturally requires a considerable amount of space, so that it has been found necessary to give to the seedlings a part of a field outside the garden. These are coming into

bloom, but being smaller feel the drought more. With a fair season as regards moisture there would be thousands of flowers in varying shades of colour, for this Iris is very variable. Between ivory-white and rich plum-purple one finds innumerable tints, some of them very delicate. Only yellow flowers are wanting, but these may come, for in some of the richly-coloured flowers the golden stripe is very pronounced, and this may develop. Diversity of form constitutes one great charm of this flower. The typical form appears to have three petals, not very broad, and the larger portion of the plants bears flowers of this kind, the petals ranging considerably in width. These æsthetic forms would find favour with many, but the florist's ideal is best realised in the almost circular flower with six broad petals, which are, however, much rarer. In every form and colour Iris Kæmpferi is very beautiful, and should find a place in all gardens where suitable conditions can be accorded it.

Byfleet. J. C.

Malva moschata alba.—This well-known hardy perennial—the white variety of the Musk Mallow—is now in fine bloom despite the frost of the past winter and the drought of the present summer. It has put forth very strong growths, and a line of it I saw a few days ago is a mass of white. The white variety, like the type (which bears rose coloured flowers), produces its blossoms in clusters at the points of the slightly branched stems. It can be propagated by division of the roots or by seed, which can be sown as soon as ripe in August and September or in early spring. Seedlings make strong plants, and there is little or no variation perceptible among them.—R. D.

Sweet-scented Pæonies.—It would be useful if any readers could give the names of the best sweet-scented Pæonies. I have a number of varieties, but, unfortunately, the names are gone. Some varieties are certainly very sweetly scented, whilst others equally as handsome are just the reverse, being most unpleasant. For border work this is not so noticeable, neither for this special purpose does it matter, but for house decoration those with the sweet scent are much to be preferred—in fact, those varieties with the "old Pæony" scent are quite obnoxious in the house. Where a quantity is grown, of course those with the sweetest scent are quickly picked out during the cutting. To many readers I am sure the names of the most sweetly scented would be most acceptable. Large bowls of the Japanese pattern filled with these noble flowers are very beautiful.—A. Young.

Lilium Hansoni.—We have of late years been accustomed to see some wonderfully good examples of the different Lilies at Kew, and at the present time there is a remarkably fine display of L. Hansoni just at its best. This very distinct Lily is a native of Japan, where it was discovered by Maximowicz in 1860, but some years elapsed before it was introduced. Now, however, it crops up occasionally at the sales of imported bulbs during the winter months, and may be obtained when dormant from the numerous dealers in this class of plants. This Lily belongs to the Martagon group, its nearest ally being the typical Lilium Martagon. The bulbs are light in colour, firm and solid, and generally travel well. This species is one of the least affected by removal of the whole of the Martagon section, and it is also the first to make its appearance above ground in the spring. The leaves are produced in whorls, though occasionally broken up in an irregular manner; they are of a bright green tint. In size and general appearance the flowers are much like those of the common Martagon Lily, but the petals are unusually thick and wax-like, their colour being yellow, dotted more or less profusely with purplish brown. At Kew there are two beds of this Lily interspersed with evergreens, each mass having about 100 spikes, ranging in height from 1 yard to 5 feet, nd altogether they form a very striking feature. It is most essential to plant this Lily where it receives a certain amount of protection from neighbouring shrubs, as, owing to starting into growth so early, the young leaves are very liable to be injured by late frosts and cutting winds. Apart from this, it is perfectly hardy and is a good garden Lily, as it does not die off in the manner common to L. auratum and some other Japanese Lilies. With the plants of L. Hansoni at Kew is associated a specimen of that most interesting hybrid, L. Dalhansoni, raised by Mr. Powell, of Tunbridge Wells, between (as is indicated by its name) L. Hansoni and that dark variety of L. Martagon known as dalmaticum. L. Dalhansoni was illustrated in The Garden, September 16, 1893, and reference to the plate in question will show the general aspect of the flower, though the Kew specimen is somewhat lighter in tint than that depicted. This hybrid is of good constitution and a valuable addition to our hardy Lilies.—H. P.

Hose-in-hose Mimulus.—I have a very fine deep yellow Mimulus spotted with dark that has developed the Hose in-hose form, the calyx having become enlarged and coloured, and so forming a second corolla. It is not new, but it is interesting, because for years past I have raised many hundreds of seedling Mimuluses, but it is very unusual to find a Hose-and-hose form among them. A few years ago Mr. William Bull offered seed of Hose-in-hose varieties, but very few came true to character. Anyone having plants showing the Hose-in-hose form would do well to propagate it by means of cuttings. I have isolated my plant and will again test its capacity to reproduce itself from seed.—R. D.

Nature *v.* Art.—Nature often steps in and tells us what to do in the matter of plant grouping. This occurred forcibly to me lately, when noticing a spreading mass of Rosa polyantha, 30 feet or so across, not a close, dense mass, but thin in places, in which Mulgedium Plumieri has sown itself. The effect of the pale blue of the latter standing amongst and over the Roses, was very soft and charming. In another and damper spot Sidalcea candida has become a regular mass, amongst which the Mulgedium has introduced itself again, with the best effect. These are plants which can fight the natural herbage and take care of themselves. Again, a mass of Spiræa filipendula pl., with a backing of Campanula grandis alba with Lilium Martagon album interspersed, is good; a rather wild-spreading mass of Campanula venusta (the earliest of the rotundifolia group), in which some plants of Papaver pilosum have introduced themselves, is very good also. A big mass of Euphorbia lucida, which has got into Alstrœmeria aurantiaca, is showy and very lasting. Again, in a smaller way, where a large stone is covered with Thymus lanuginosus, Ajuga genevensis has crept in and sown itself here and there amongst it; the effect of the deep blue on the grey carpet is excellent.—T. Smith, *Newry.*

Notes from Newry.—Three interesting allied plants are in flower here together—Anemiopsis californica, Houttynia cordata, and Gymnotheca chinensis, the last a particularly graceful thing, with pendent tassels of white filamentose flowers. Amongst other more or less uncommon things are Amianthium muscætoxicum, with dense, thyrse-like heads of creamy white; Boykinia aconitifolia, with flat heads of milk-white flowers; Clintonia umbellata, a beautiful plant, with umbels of pure white, a clump growing underneath a dense mass of Diphylleia cymosa remaining fresh for several weeks. I have one charming selection in which the flowers are quite covered with tiny pink dots. Haplopappus pulchellus has been, and is, beautiful, the dry, warm weather having just suited it. It is a yellow composite, of uncommon appearance. Xerophyllum asphodeloides has been very beautiful, large numbers having flowered this season. I find this does best in a little shade. As a sweetly pretty flower for a damp and shady spot, the double white Ragged Robin is desirable. Spreading masses of Pentstemon glaber, P. g. roseus, P. secundiflorus, and P. speciosus, are beautiful. Dianthus frigidus, a pure white-flowered kind, is excellent; D. Duchess of Fife is much like D. Michael Foster, but infinitely freer, while D. Reuterianus is a dense-growing kind, with flowers much like those of D. alpinus. Thymus nummularius has been added to the collection this season and is very good; the spikes of rosy flowers are from 4 inches to 6 inches long, something like T. comosus, but finer. Hydrangea vestita promises to become a tree; it has for several weeks borne flat clusters of white, mostly sterile flowers. My tallest specimen is about 7 feet, and the destructive frosts of winter, or those more recently in June, had no effect upon it.—T. Smith, *Newry.*

Anthericum liliastrum majus.—This beautiful plant, which was alluded to on p. 447, well deserves all that is there said in its favour, and it is not half enough grown, though it has been known now for many years. I first knew it in the once famous nursery of Messrs. Henderson, in the Wellington Road, St. John's Wood. The rather stiff soil of this nursery suited this Anthericum well, and it used to form a very attractive feature.—H. P.

CALOCHORTI AND LILIES AT COLCHESTER.

A visit to Messrs. R. Wallace and Co.'s nursery at Colchester is quite sufficient to dispel the erroneous notion which prevails and prevents many from even attempting to grow Calochorti, because they are believed to be difficult plants to deal with, giving very uncertain results. Almost everyone who sees them is fascinated by their grace, quaint beauty, and lovely colours. The groups of cut specimens that Messrs. Wallace have shown from time to time at the Drill Hall and elsewhere have attracted much notice, and without a doubt will materially serve to draw more attention to these flowers. But as it might be urged that the showing of cut flowers alone affords no indication of the growth or character of the plants, or in any way proves that their appearance growing in the garden is an ornamental or desirable feature, we went to see these Calochorti as they grow at Colchester, and were charmed with the picture they made. A large square-raised bed devoted to them alone was gay with myriads of blossoms open wide in the sun, the flowers looking like butterflies, alike in their quaint colouring, with eye-like blotches on the petals, and in their graceful poise upon the plants. Given the essential conditions of culture as here, indeed, it was evident that the reputed tenderness and delicacy were non-existent, and instead we saw plants of all sizes according to species, ranging in height from 1 foot up to 3 feet, and massed in the bed they were literally sheaves of bloom.

The tallest grower was C. splendens, which, in common with other species, shows marked variation. What is grown here as the type is a charming flower of a light lilac colour, its inner base clothed with a thick mantle of long silky white hairs and without any spot or stain of other colour. C. splendens atro-violaceus is taller and was quite a yard in height, the plants covered with flowers, which are of a deeper lilac-rose colour and have broader petals stained with dark red at their base. C. venustus, in great variety, is a host in itself, and the family would command our admiration if it consisted of this species and its varieties alone. Here again is abundant evidence of natural vigour brought out by adapting the cultivation to the needs of the plants. Who would say that Calochorti are delicate when one bulb of two years' growth, about the size of that of a good Crocus, sends up six flower-spikes, each nearly 2 feet in height and bearing thirty flowers? This was

done by a bulb of C. venustus oculatus, a truly lovely form with a long purplish bud expanding into a large flower, each petal having a black eye with a clearly defined margin of rich yellow, which shades to a lighter tint in the rest of the flower that is spotted at the base in an indescribable way. C. venustus citrinus is a richly coloured variety of the preceding, the ground colour lemon-yellow with a dark brownish blotch and chequered with reddish brown at the base. C. venustus purpurascens is distinguished by its deep purple exterior, but when fully open it resembles C. v. oculatus in its colour and markings. C. v. Vesta, a recent introduction, is a fine variety, robust in growth and free flowering. The flowers are large and handsome, a perfect harmony of quaint colour in yellow and brown, the latter shade forming an almost regular zone in place of the usual blotch. C. v. roseus is a well-marked variety in which the blotch is of a decided rosy tinge. These three last-named forms were all figured in a coloured plate in The Garden of Nov. 3, 1894. C. v. Vesta is a gem, having a pale sulphur base, free from spots or markings of any kind. C. v. pictus is another neat and pretty form, whiter than any other variety in this group, with a small brown blotch and rosy spots at the base. C. luteus, with clear lemon-yellow flowers, which are spotted with red, is a bright and showy kind, but brighter still, and a sturdy, robust-looking variety is a new form of C. luteus named concolor. At present it is very scarce, but the plants we saw were vigorous-looking, the flower-stems stout and erect, bearing large open flowers of the richest buttercup-yellow, slightly veined and spotted with brown at the base. C. macrocarpus was just bursting its great buds, which expand into enormous flowers of a deep lilac tint, whilst the new and delicately-coloured C. Lyoni was fading. C. Kennedyi, too, was just out of flower. It is a brilliant species, with flowers of an orange-scarlet colour. A coloured plate of it may be found in The Garden of February 11, 1893. All these Mariposa Lilies were growing and flowering in one bed—a rare assemblage of lovely flowers. In an adjoining bed an earlier section of this family was passing to rest. This embraces the Cyclobothra group and the Star Tulips. The former have globular, drooping flowers, and one variety—C. puchellus—was still flowering. It is a long and persistent bloomer and has rich yellow flowers. The Star Tulips have erect stems about 6 inches high, bearing open flowers, which appear at the same time as those of the varieties in the Cyclobothra section, so that the family can conveniently be divided into two groups for garden culture. The details of

Culture

as pursued with so much success here are of the simplest description, and those who like to imitate them may reasonably expect to be likewise successful. The Calochorti are grown in beds in the open ground, this having been found preferable to any coddling in pots or frames. They are much hardier than is generally supposed and really are more liable to injury from heavy winter rains than from frost. It follows, therefore, that a well-drained soil is one of the first essentials, and to facilitate this the beds at Colchester are raised above the surrounding level of the ground and have a slight slope to the north. The soil is made very porous by an abundant use of grit, the bulbs are planted in November and a covering of reeds given, which answers admirably in throwing off an excess of moisture. This is removed as growth advances early in spring. When in full growth they want abundant moisture, as the porous soil soon dries up, and after flowering thorough ripening should follow. This can be facilitated by placing lights over the bed, or the bulbs may be lifted, replanting them again the following November. Calochorti being lovers of the sun, the present season has been a favourable one for them, but in the hands of Messrs. Wallace they are no longer in the experimental stage, and in years of less sunshine they flower them well under the conditions of treatment indicated above. There are many gardens in warm districts and on dry soils where these flowers may be grown, and, failing natural aids or climatic advantages, Calochorti are even then worthy of the trouble involved in any special preparation of a site for them.

Lilies.

These, in infinite variety, are a special feature, and Messrs. Wallace deserve credit for their endeavours to popularise them. Lilium Thunbergianum, or L. elegans, as now generally called, was flowering in many fine distinct forms of varying heights, especially noticeable being atro-sanguineum, with its deep red flowers, Van Houttei, of a deep, dark crimson-scarlet, and Alice Wilson, most distinct, with lemon-yellow flowers, having a band of a deeper yellow hue down the centre of each petal. L. elegans Wilsoni is a good form, tall, robust, and one of the last of these varieties to flower. L. canadense was abundant in several distinct varieties, yellow and deep orange, the flowers much spotted and gracefully poised in a pyramidal head at the top of a stout stem. L. Grayi, of similar habit to the preceding, was flowering well. It is a comparatively new kind and an acquisition, the flowers drooping, bell-shaped, of a rich red colour, with dark spots. L. Parryi, another uncommon, though by no means new species, was also in bloom. Its flowers are yellow, freely spotted with dark brown. L. Krameri was prominent in bud, and L. Leichtlini was represented by a strong batch. L. Coridion, a dwarf and graceful Lily rarely seen, was flowering also, the blooms of a rich citron-yellow colour. L. Humboldti was conspicuous, its tall stems terminated by fine heads of purple spotted yellow flowers. A batch of Burmese Lilies, supposed to be L. Lowi, gave promise of something new, as in addition to the true L. Lowi were one or two more, differing from it and from every other Lily in this large collection in growth, one noticeable form having distinct downy purple-tipped leaves. L. Henryi, although wanting some weeks yet before expanding its rich flowers, must be mentioned for its robust growth. Happily, it comes into that class that wants no special preparation, but succeeds in ordinary garden soil, and without a doubt it is one of the garden Lilies of the future. We saw large beds of it, and they were perfect thickets of luxuriant growth, even small imported bulbs of last year having shoots already 4 feet in height. It has been well described as an orange-yellow L. speciosum, and although we might say it is hardly acclimatised as yet, there was no other Lily in this large collection more luxuriant.

Those here enumerated by no means represent all that were in flower, as we have purposely mentioned the rarer species that are not as yet much seen in gardens. It will suffice for the rest to say that all the older and better-known garden Lilies are equally as well grown.

Inula Hookeri.—Is there not some mistake about this? The true Hookeri—at least, as I know it—does not flower before August, and its flower-heads, instead of being 2 inches to 3 inches across, are at least 4 inches over. Is not the plant to which the certificate was given, I. hirta?—T. Smith.

Mertensia virginica.—With respect to the American Cowslip blooming in May, queries anent which appear on pp. 447 and 467, I may mention that the plants alluded to by me in my notes on "May in South Devon" were flowering during the first week of the month in a shady spot, but, as "W. H." (p. 467) remarks, are at the present quite dormant.—S. W. F., *Torquay.*

Campanula grandis.—This Bellflower is at present an object of great beauty in the flower garden. Both the coloured and the white varieties are charming, but the latter is certainly the more effective both in the herbaceous border and when used for indoor decoration. Growing in good soil, the flower-spikes reach a height of over 2 feet, the individual blooms, that are of a shining satiny white, often exceeding 2 inches in diameter, and being of more lasting character than those of most of the Campanulas, comparing favourably in this respect with the well-known and widely grown biennial, the Canterbury Bell (C. Medium). The plant is easily increased by division, and a small one will in a couple of years form 50 or 100, as the clumps spread so rapidly, that if left alone they soon form dense masses a yard or more in diameter. This Campanula is now rarely to be met with in this district except in cottage gardens, but it is well worthy of a place in the collection of the lover of beautiful flowers—far more worthy indeed than the tender bedding plants, such as Geraniums, Calceolarias, and Lobelias, for whose sake it has been in many cases ousted.—S. W. F., *Torquay.*

NOTES ON HARDY PLANTS.

Veronica cupressoides.—All the conifer-like Veronicas, or, as they are sometimes aptly called, the Whip-cord section, are known to have been extremely shy bloomers so far, and we have had since their introduction a fairly wide range of seasons, as very hot and very wet summers, and mild as well as very severe winters. It does seem strange that these plants are flowering better after the severest of our winters than have been their wont, and especially when we recall that their native climate never has such low temperatures. Another peculiarity is that the inclement winter of 1894-5, following on which some are flowering as they have never done before, has killed more of the species of this section than ever I experienced before. Let us hope that the flowering of some is not caused by a reduced state of the plants constitutionally, as we have often seen to be the case. This certainly would appear to explain the flowering of some and the death of many after the hard winter, and I must confess that the general appearance of my plants favours this view.

Scabiosa succisa glauca.—This is a pleasing variety of the common Devil's-bit. The flowers are rather larger and somewhat brighter than in the wilding, but, I am sure, many would like it for its pleasant perfume, which almost exactly resembles that of the Elderflowers. A good piece of it stands by the walk side, and many stop and ask what the sweet scent comes from. The plant is a rather strong grower and not quite suited for the choicest borders, but wherever sweet smelling plants are desired this is worthy of note.

Gaultheria tricophylla.—I enclose one or two of the big berries of this little creeper. I have several times before in these notes mentioned this Indian species. It gets into fruit early and the berries last for many weeks in the pleasing pale blue colour now to be seen. A friend aptly described the effect of a fruiting plant the other day. He said, "It could easily be taken for a creeper among which some bird had laid its eggs." The plant never grows higher with me than 1½ inches, and in moist peaty soil and sand runs freely. The flowers are large, but owing to their lurid brown colour are inconspicuous. Soon, how-

ever, the berries swell and colour, and then the deep evergreen foliage is enlivened in the most charming manner.

Dianthus Sternbergi.—This is a neat and distinct variety or species—I cannot say which. There are several nearly like it in many points, as gelidus and frigidus, but in one respect at least it is well marked as differing—its foliage is very short, rigid, squarely set on the stems, and so thick as almost to resemble some of the Mesembryanthemums. The flowers are each 3 inches high, white, with deeply-fringed petals and a sepia-coloured eye. It grows here close to a tuft of the very spiny Acantholimon androsaceum, which it well matches for the glaucous hue and stiff and pointed leaves. It has none of the miffiness of the softer-leaved Dianthi such as glacialis and alpinus, and I have never seen its leaves bored by grubs, which trouble me more than anything else as regards alpine Pinks. J. Wood.

Woodville, Kirkstall.

FLOWER GARDEN NOTES.

Summer bedding plants.—A season like the present brings out very clearly the advantage of putting out well-prepared plants of good size rather than weakly stuff, that being crowded together in boxes has very often the greater portion of its roots torn away in the removal and is a long time making any show, especially if the weather keep dry for several weeks following planting time. Plants, on the other hand, turned out singly from pots if thoroughly well soaked receive no check, but start into growth at once, and where this is the case flower gardens are looking very gay, especially when the fact is taken into consideration that for the last two months we have hardly had enough rain to damp the surface of the ground except a very slight shower about the middle of June. I said above, plants turned out singly from pots were producing the best effect, but to these must be added batches of sturdy hardy plants, cuttings of which were inserted in autumn, transferred thinly for a time to a well-prepared bed, and when required thoroughly soaked with water and carefully lifted to avoid any mutilation of the root. Antirrhinums are among the best of our hardy plants in a dry season alike in the formal garden and herbaceous borders, and I am very pleased with the habit and flowering properties of three distinct shades in white, crimson and yellow that were selected last year from a batch of seedlings and propagated in the autumn of 1894. Beds of considerable size can be made very beautiful by planting the Antirrhinums in bold clumps and filling in with dwarf Ageratum, Mesembryanthemum, Manglesi Pelargonium and Vesuvius or Ball of Fire Tropæolum as the colours may be required. Possibly Vesuvius Tropæolum is the very best plant that can be found to associate with a vigorous strain of white Antirrhinum. Other hardy plants that show to advantage on a dwarf white carpet (planted together in sufficient quantity so that one gets a good idea of the beauty alike of flower and foliage) are the varieties of herbaceous Lobelias. The remarks above as to the advantage of turning out well-established plants from single pots or to so manage as to avoid root-mutilation are peculiarly applicable to bedding Tropæolums; they are so tender and brittle in root and foliage, that when once they are allowed to get crowded separation is not an easy matter. Those who want a first-rate dry-weather plant as a dwarf yellow cannot do better than trust to Mrs. Clibran Tropæolum. It is far more enduring in a season like the present than Calceolarias or yellow Violas. Pelargoniums, whether zonal, variegated, Ivy-leaved or scented, are all looking much better than at the corresponding time in 1893, a season we have matched in the matter of prolonged drought, although possibly not in the amount of actual sunshine or intense heat. Growth made is sturdy rather than vigorous, and those varieties grown for their flowering properties are a mass of bloom. I do not care much about the variegated or tricolor forms, but make an exception in favour of Manglesi, Lady Plymouth and Chelsea Gem; the double pink flowers of the last contrast beautifully with the bright variegation.

Herbaceous borders.—Many inmates of these borders show unmistakable signs of the effect of the continued drought, and in all cases where watering is practicable a thorough soaking should be given. Tufted Pansies, for instance, are hardly likely to throw cuttings in quantity unless they get more moisture than is this year naturally provided; indeed, unless abundance of rain comes, and that speedily, we shall in the case of this flower have to rely on later propagation by division instead of July cuttings. There are few places that have been less visited by the heavy showers than this particular part of North-west Surrey. Storms have worked up, but have split at a comparatively low point in the heavens, and passed with aggravating persistency to the right and left. A good soaking will be necessary to secure a second growth and display of flower on the Pyrethrums; at present they are not moving an inch. Most of the Spiræas, where fully exposed to the sun, are losing their bottom foliage, and the display of flower will be short-lived. As in the case of fruit trees and vegetables, a mulching should always accompany the watering of herbaceous plants, and it is advisable to see to it if possible before the plants begin to suffer. Of course in the majority of cases watering long stretches of herbaceous borders is quite an impossible matter; things have to take their chance, and the only relief one can afford is to put on a mulching of some kind to keep the soil from drying out so quickly. Following up in connection with such borders the few selections made above as to good dry-weather plants, it may be noted that there are some that look remarkably well and appear in no way affected by the lack of moisture. The varieties of Thymus, Sisyrinchiums, Linarias, Centaureas, Veronicas, Gaillardias, Anchusa italica among tall and the old double Chamomile among dwarf plants are all cases in point. Pinks and Carnations in variety also come very well through a dry summer, but to secure this two cultural points are essential. The first is well-prepared deeply-dug borders in which a liberal dose of mushroom or peat moss manure has been incorporated, and the second is a good surface mulching preferably as soon as the beds are planted in autumn, as the moisture is thereby well retained. I have been waiting for rain in order to take up and divide the best of the Polyanthuses selected from this year's display. If it is absolutely necessary to transfer them before the long-desired rain comes, I shall have a tub handy and give them a good soaking before replanting. Big plants of Polyanthus naturally draw and impoverish the soil in any season, and just at present the border in which they are growing is as hard as a road and as dry as powder. If a batch of seedlings is ready for transplanting from the spring sowing, it will be found advisable to soak them thoroughly a few hours before lifting. Where old plants were left for seed they will require looking through daily. As the seed is now ripening up, it is a favourable time for harvesting the same, very different from that of last year, when the rain spoiled a rather large percentage of the pods. Seed boxes of herbaceous plants sown during May or June will want attention in the way of a light watering if the seedlings are showing, and continued shade during the hottest part of the day if they are not yet peeping through, also a night inspection for slugs if these are likely to be troublesome, or they will be the first to find the tiny seedlings and do a lot of mischief in a single night. E. Burrell.

Claremont.

Anomatheca cruenta.—This is a remarkably pretty little bulbous plant, a native of the Cape of Good Hope, and nearly hardy in this country. It produces a bulb a good deal like that of a Freesia, but smaller, while the sword-shaped leaves are disposed in two rows as in the Montbretias, to which this little Anomatheca (before the flowers make their appearance) bears a certain amount of resemblance. The flowers, which are produced on scapes from 6 inches to a foot high, are nearly an inch across, in colour bright carmine-red, and composed of six segments, the three lower ones being blotched towards the base of the petals with rich velvety crimson. It seeds very freely, so that if a few pots of it are employed for the embellishment of the greenhouse and the seeds are allowed to ripen, the probability is that during the following season young plants of it will crop up in many directions. Unlike most bulbous plants, the seedlings soon attain flowering size; hence if the seed is sown when ripe the young plants so obtained will bloom the following season. As the flower-spikes are pushed up freely and there are several blossoms on a scape, it is an object of beauty for a considerable time. This Anomatheca is a plant of very easy culture, and may be treated in various ways. A very good plan is, when dormant, to shake the bulbs out of the soil in which they have been growing, and winter them covered up with sand and placed where just free from frost. Early in the new year they may be potted, using an open loamy soil. From eight to ten bulbs in a pot 5 inches in diameter will form effective little clumps.—H. P.

Gypsophila elegans.—The Gypsophila seems to have become an indispensable flower, and even the flower-sellers in the streets use much of it in the place of Fern for giving lightness and grace to button-holes and sprays. The variety at present in use is G. elegans, a hardy annual, having the same elegant habit as the later and perennial species (G. paniculata), whilst its flowers are larger. Between the two a very long succession of this flower can be maintained, and those who have to supply cut flowers in quantity will find them both worthy of their attention. At Syon House several sowings of G. elegans are made to keep up a supply of its flowers till those of G. paniculata in the borders appear, whilst a late sowing of the annual kind again comes in after the perennial sort is over.

PINKS.

For years Mr. Ladhams, Shirley, Southampton, has paid much attention to the growth and improvement of the Pink. A really good form of border Pink having distinct markings and freedom of flowering and perpetual is a gain. The one he prizes above all, and which he raised and named after his son (Ernest Ladhams), is now well known as being the best perpetual flowering Pink in commerce. The soft pink colouring is at all times so pleasing; its fragrance, too, none object to. I lately saw one huge bed of this variety containing 1000 plants, and as they were literally smothered in bloom it was a grand sight. For flowering in pots, too, during April this Pink is valuable. Hundreds of seedlings Mr. Ladhams has at the present time on trial. Many of them appear to be a distinct advance upon older kinds. Helen Holmwood is a sport from the well-known Charles and in every way an improvement, being more robust. The white ground is heavily marked with bright pink. Jane Duval is quite perpetual in its flowering, purple markings on a white ground; the flowers are freely borne on stout, erect stalks. Southampton has large flowers, soft pink, with deeper blotch. The above varieties were raised during the present year by Mr. Ladhams. The best of his 1894 varieties are Charles and Morning Star. The former is especially robust, much like Anne Boleyn, but deeper in colour, bright pink, with deeper markings. The following are also of Mr. Ladhams's raising, he having free-flowering border varieties more in mind than exhibition blooms pleasing to the florist only: Caroline, white, with a faint blotch of pink in the centre of each petal; Fashion, of quite a novel shade in Pinks, almost single, but very showy; and The Lady, semi-double, bright pink, each petal marked with a deeper blotch at its base. Queen of the South is quite a fortnight earlier in opening its flowers than Her Majesty. The flowers are freely borne on stout



stalks and have less tendency to splitting than many others. Many more might be named, but the above will give some idea what is being done to increase and improve the race of border Pinks. At a recent meeting of the Shirley Gardeners' Association Mr. Ladhams exhibited forty varieties. The seed is sown in January in a cool greenhouse, thus enabling the plants to have a long season of growth. Many of the plants flower the same year. E. M.

Lathyrus magellanicus.—Will any reader tell me where I can get L. magellanicus (Lord Anson's Pea, introduced by his cook, 1744), a maritime plant? (See Loudon's "Ladies' Flower Garden," p. 150, plate 36.)—D.

*** The answer to this query (a very common one, by the way) is that the true L. magellanicus (Lamarck) is probably not now in cultivation. I know of no one possessing it. By an unpardonable blunder the name Lord Anson's Pea has been given to the blue var. of the common annual L. sativus, which has nothing in common with it, though not without merits of its own. It is greatly to be desired that seedsmen and seed growers would mutually agree to relinquish this name. For ignorance there might be some excuse, but there is none for a wilful persistence in the employment of a name which excites a fallacious hope in the mind of the purchaser. This Pea is, in short, the horticultural "Mrs. Harris," having practically no real existence but in the pages of botanical works. I will venture to add, that could it be re-introduced, it would probably be found to possess less real value than its seekers imagine.—W. Thompson, *Ipswich.*

Garden Flora.

PLATE 1022.

TECOMA SMITHI.

(WITH A COLOURED PLATE.*)

As a greenhouse plant for this country, Tecoma Smithi is by far the best of the genus yet introduced. All the species in cultivation have beautiful flowers, but they are, with scarcely an exception, shy-flowering, and for this reason are but little grown. T. Smithi, however, does not possess this character. Plants were raised from seed at Kew in 1889. These flowered in the autumn of the following year, and these plants, or others raised from them by cuttings, have flowered every year since. This may, indeed, be described as one of the best greenhouse plants introduced in recent years, and a first-class certificate was granted it by the Royal Horticultural Society in October, 1893. It is of sturdy, erect habit and has pinnate leaves, the leaflets being 1 inch to 2 inches in length, oblong and serrated. The flowers are produced at the ends of the shoots between the months of September and January. They occur in large, erect, compound racemes, which are sometimes as much as 7 inches or 8 inches in diameter and the same in length. The flowers, which on the larger racemes number several scores, are tubular, more or less drooping, and 1½ inches to 2 inches long, with five reflexed lobes to the corolla. Their colour is a bright yellow, tinged with orange. This Tecoma was raised by Mr. Edwin Smith in Australia, and its parents are said to have been T. capensis and T. velutina. If it be really a hybrid, the fact of its coming true from seed makes it an especially interesting one, for it is well known that most hybrids when propagated by seed show much variation, and revert back at each successive generation more and more to one or other of the parents. Mr. Guilfoyle, the director of the Botanic Gardens at Melbourne, who first sent seeds to this country, says that in Australia T. Smithi flowers for at least nine months of the year; it is therefore an exceptionally valuable plant for sub-tropical climates.

T. capensis.—This species is worthy of mention as being the one most frequently grown in gardens. It is of semi-scandent habit and may occasionally be seen treated as a climber on the roof of a greenhouse. Its thick, strong growth renders it better adapted for clothing pillars, &c., than for a place on the roof where it obstructs the light. It is as shy-flowering as most of its fellow-species, and when kept indoors all the year it is only after exceptionally long, hot summers that it blooms. When treated as a pot plant, however, and exposed out-of-doors to full sun and air during the summer months it blooms freely enough. Its racemes are terminal and the flowers are of a brilliant orange-scarlet. It was introduced from the Cape of Good Hope in 1823. This species might be made one of the winter glories of the Riviera. I remember seeing a group of it in the Acclimatisation Garden at Hyères one October day some years ago which was simply a blaze of fiery scarlet.

Like most of the Bignoniaceous family, the Tecomas are vigorous growers, and it is a very easy matter to obtain strong, healthy plants. They like a rich loamy soil, lightened by the addition of coarse silver sand and leaf-soil. When grown in pots they may be freely supplied with manure water, more especially after the young racemes have formed. As already stated, it is in the production of flowers that the gardener's skill is most needed, more especially with such sorts as T. capensis, T. McKeni, &c., T. Smithi not being difficult to flower. Abundance of sunshine and fresh air are the two chief factors; plants grown indoors all the year round only flower after exceptionally long, hot summers, and not then, even, if they are in shady positions or far from the glass. It is, consequently, the best plan to grow them in pots, so that during the summer they can be taken out of doors and exposed to full sunshine. Small plants consisting of a single stem may be had in flower within nine months of their being struck, and both T. Smithi and T. capensis make very useful plants when grown in this way for autumn flowering. The cuttings should be taken as early as possible in the year, making them of half-ripened wood and about 3 inches long. These should be struck singly in 2½-inch pots in a brisk bottom-heat. The plants should be grown on quickly in a moist greenhouse until about the middle of June, when, according to their strength, they will be in pots 5 inches to 7 inches in diameter. They should then be hardened off a little in a cool frame and afterwards stood outside in a sunny position. Towards the end of August racemes will be pushing from the tops of the shoots (which ought never to be stopped), and they may then be placed in a frame again, keeping them moist and fed with manure till the racemes are well advanced. Axillary shoots almost invariably begin to push at the same time as the raceme, but should always be removed, so that the entire strength of the plant may be concentrated in the inflorescence. These one-year-old plants vary from 1 foot to 2 feet in height. After flowering they may be wintered in a cool frame, cut back in spring and grown on as before. In the case of T. capensis, however, the plants appear to flower with greater certainty when grown on from cuttings each year. W. J. B.

* Drawn for The Garden in the Royal Gardens, Kew, by H. G. Moon, January 11, 1895. Lithographed and printed by Guillaume Severeyns.

The Week's Work.

THE KITCHEN GARDEN.

French Beans.—These, where growing in rough home-made frames, will now have borne most of their crop, and in order to make the most of the young pods just set and setting, it should be seen that no old pods are hanging on the haulm, these having a most impoverishing effect. A thorough soaking also of farmyard liquid should now be given to aid in swelling off the remainder of the crop. Successional batches coming on in the open garden must likewise now receive attention. Mulch with short manure, old Mushroom manure, or even lawn mowings, soaking the same thoroughly with liquid manure. Younger batches must now have a little soil drawn to them to steady them, but as the soil in most gardens is still in a very dry state, the ground between the rows should receive a good moistening the previous evening. Another sowing may now be made, adopting the previously advised plan of using three sorts in equal proportions, Canadian Wonder still being one of them. For a July sowing, Canadian Wonder will be best omitted, earlier sorts, such as Sion House and Webb's Victoria, being substituted. To all future sowings allow plenty of space both between the rows and plants, and also a good rich root-run. Sow the seeds in shallow drills, finally leaving the soil in these somewhat below the ordinary ground level. It is also advisable to soak the ground after being dug before sowing the seed. Canadian Wonder will sometimes on good soil grow to a great height, and be, in consequence, rather tardy in coming into bearing; to mitigate this latter evil, pinching may be resorted to when the growth has reached 18 inches. French Beans are much benefited by an overhead watering several times weekly in the evening. By this the foliage is kept free from spider.

Scarlet Runners.—The present season is not the most favourable for the well-being of this popular vegetable, there being a too arid atmosphere to favour the free setting of the bloom and the rapid swelling off of the young pods. To meet this deficiency extra labour is needed in the shape of heavy root mulchings and copious drenchings. This can more easily be done both in the case of Beans and other growing crops this summer, as, owing to the protracted drought, hoeing has been reduced to a minimum. By all means keep the pods of the first yield of Scarlet Runners closely picked in, this allowing the uppermost portion of growth to become vigorous and to form stout bloom-trusses. If a hose or garden engine can be turned on to the rows towards evening now and again it will be of great benefit, assisting to set the blossom and aiding in keeping the foliage clean and healthy. Another sowing may yet be made of Painted Lady, a quick-growing early yielding variety, the growth being pinched and no stakes used, as in field culture. This batch will often prove most serviceable should a dry, hot autumn set in, the thick growth shielding the bloom and young pods, and keeping the ground from parching, as when sown in rows. These will produce Beans until cut down by frost. Those who are this year trying the new climbing French Beans will find them of great value. This new race is certainly a great acquisition. With all late batches of Beans, whether of the runner or dwarf section, it is well not to postpone mulching until they are in a bearing condition. If done early and rich material used, the ground not only becomes thoroughly moist through repeated waterings over the mulch, but much of the nourishment is washed down for the roots to feed on by the time the crop tells on the energies of the plants.

Frame Cucumbers.—The season having been so far favourable for the growth of these, plants got out in good time will now be yielding freely and will require plenty of support. Avoid overcropping, even where profit is the chief consideration, as this will quickly tell on the plants and

bring about a premature collapse. Go over the frame once a week and reduce the fruits where clustered together, thinning out all weak growths and pinching the heads of strong forward shoots. Feed liberally for the rest of the season, closing moderately early, and giving the foliage a good steam bath on hot sunny afternoons. Attend to the admission of a little air early in the morning, a little given in good time, say, half-past seven, keeping the temperature from rising to such a high pitch during the forenoon. Cut the fruit as soon as a reasonable size has been reached, and place the stems in a vessel furnished with a little damp moss. This is preferable to water and the fruits keep much better. Keep in a cool, dark place. When going over the plants remove all male blooms, as these are only hindrances to a free and vigorous growth. Where fresh plants have now to be put out use a somewhat retentive soil, this being necessary at this advanced date, in order to retain plenty of moisture; make it very firm, and water well the day before putting out the plants. If any traces of spider are on the plants, syringe well with sulphur water previous to planting. A good sort for sowing for late frame use is Lockie's Perfection, it being of quick growth and an early and good fruiter, also of excellent quality. In fact this is a good Cucumber for all purposes. Duke of Edinburgh is also capital for frame use, though a much larger fruit than the foregoing.

J. Crawford.

FRUIT HOUSES.

Pines—fruiting plants.—The bright weather of the last few weeks will have brought the early fruits on rapidly, the Queens ripening more quickly than required. When fruits are wanted for special dates they can be retarded by removal into cooler structures, shading them during the hottest part of the day. Fruits of the Queen section that are colouring are not hurt in the least by removal to a cooler and more airy house. Matured slowly they are better flavoured and a glut of fruit at one time is prevented. Fruits fully ripe which are required to be kept some little time should be removed to a cool fruit room, kept dry, and in this condition will keep plump for some time. If cut they soon shrivel. It is best to remove the suckers before placing the plants in the room. Plants with ripening fruits should not be dried off suddenly, but be given sufficient water to keep them fresh. Many shifts can be made with plants approaching maturity during hot weather, as frames not heated or small pits can be used to retard well advanced plants, the fruit being kept clear of drip and given a free circulation of air. Plants with fruits swelling need liberal treatment and a moist atmosphere. The night temperature at this stage should not fall below 75° and 10° higher by day with air, closing sufficiently early to run the thermometer up to 100°, syringing all parts of the house to create a genial atmosphere, gently dewing over healthy plants which are fairly well advanced, but not filling the axils of the leaves full of moisture. Watering will require more attention for the next few weeks, as with plenty of sun the air will be drier and the plants require more moisture at the roots. If allowed to get too dry it is a difficult matter to get the soil saturated, and the fruits cease to swell, the green tops becoming elongated. Give food freely in the way of liquid manure or guano water. Strong plants making a lot of growth should not be fed; indeed, they require quite the reverse treatment, keeping them drier for a time. I have found it beneficial to remove such plants into a lower temperature to arrest growth. Any plants of the late summer fruiters that may have been retarded should now be placed in the fruiting division and treated as advised for plants swelling their fruits. Strong plants from last season's suckers of the Smooth Cayenne section or Charlotte Rothschild pushed on now will furnish nice fruits at a season they are much appreciated, as if they show fruit during the next few weeks they will be valuable for winter dessert.

Young Pines.—These will include those placed in fruiting pots recently. More care will be necessary with these, as having fewer roots, excessive moisture will soon sour the soil and a sickly growth follow. With free ventilation there should be no lack of moisture if the plants are robust and filling their pots with roots. The bottom-heat for plants at this stage should not fall below 85°, and the temperature of the house may range from 70° to 80° during the day, with 7° to 10° lower at night, maintaining a moist growing atmosphere and well syringing all parts of the house. If syringed overhead too freely or kept too moist, an excess of sucker growth is encouraged, and the plants will probably give small fruits. With the thermometer at present higher during the day in the open than the temperature advised, fire-heat from 9 a.m. till 6 p.m. is not required, but if the bottom-heat is supplied by hot water this should not be turned off. A sharp watch must be kept for sudden changes, reducing the air. Shading will be necessary in most cases; use a light material such as scrim canvas or netting, not a permanent shade, which is most injurious. Young plants less advanced may at this season be grown in temporary structures or frames if a regular bottom-heat of 70° to 80° can be given. If there is not much top-heat cover the glass with mats on cold or windy nights to keep up the warmth, and in such cases less moisture must be given, less syringing and early closing being resorted to.

Potting suckers.—This will be the most pressing work for the next few weeks, as most of the early Queen suckers will be fit for potting ere this. I do not advise wholesale potting, as it is much best to do the work piecemeal as the plants are cut or cleared of the fruit; and should the suckers be small, it is much better to leave them for a little longer on the old stools. The soil for the young stock should be prepared in advance, using good sound fibrous loam, with a small portion of bone meal. Give ample drainage and pot firmly, having the soil sufficiently moist. The size of pots varies according to the strength of the plant; 6 inches to 8 inches are the usual sizes. If the suckers are strong most of them may be given a 7-inch or 8-inch pot. Clear the suckers of the bottom leaves only, taking away the portion that would be buried in the soil, as the less trimming done the better. To detach the suckers from the plants give a slight twist, not using a knife. Plunge in a bottom heat of 80° to 90° and as close to the glass as possible, with ample shade during the hottest part of the morning, removing early and closing before the sun leaves the house or pit. Lightly damp overhead at closing time and water when required, but only sparingly till the roots get round the sides of the pot. If the soil is moist little water will be required till the plants are rooted.

Melons.—The season has been most favourable for these fruits, but there is still a necessity for continued warmth in the hot-water pipes, as there are times when the temperature is much lowered owing to rain and other causes. From this date canker will be troublesome, especially so with crowded plants in old houses without means to keep up the temperature. If canker appears keep the plants drier, and dress the affected parts with fresh quick-lime, sulphur, and finely powdered charcoal. Closely watch ripening fruits and remove them just as the stalk is cracking. The thick-skinned varieties are much better flavoured after having been cut from the plants for a few days. Melons at the final swelling stage need more care in watering, as excess causes them to crack badly and they do not keep well. Manures must be withheld, as the flavour is so quickly impaired. Plants with fruits just set and at later stages will also need more syringing overhead in such seasons as this. I never knew red spider more troublesome. Though a free use of the syringe will keep down the pest, it often makes too much headway, when sponging or covering the leaves with sulphur is the best remedy. Painting the pipes also with sulphur and milk or a little oil to make it adhere, and heating them late in the day will check both mildew and red spider.. Black fly if troublesome is also difficult to get rid of, and the plants suffer if smoked too strongly. Syringing with tobacco water will be the safest remedy, shading for two or three days after doing the work. There should be no lack of food to plants swelling their fruits, liquid manure being the best at this season. Top-dressing should not be omitted, giving a small portion of bone meal in the compost.

Frame Melons.—Good fruit will this season have been secured without fire-heat, but to get these every ray of sun-heat must be retained by careful ventilation and early closing. In previous notes I suggested raising the growths by means of a simple trellis or support. This gives a free circulation of air round the stems, and the fruits, being near the light, do not crack and are much better shaped. With the plants in movable frames and manure as the heating agency, it is well to renew the outside linings frequently. The warmth in the frames can be retained by covering the glass at night with mats. In watering much care will be required now, as the manure retains moisture freely and less syringing overhead is necessary. Watering should be done sufficiently early in the day to allow the leaves to get dry before nightfall. The steme should be kept dry and the lateral growths not required removed.

Late Melons.—In some gardens late Melons are required, and, though often condemned as poor in flavour, I have had Melons in October as good as could be desired. Much depends upon the season and the means to grow the fruits. Like early fruits, they need more than ordinary care to get perfect finish. Now is a good time to prepare for late crops, as if the plants make ample root and top growth there is less difficulty in finishing the fruits. Pot culture may be resorted to with advantage where there is any difficulty in giving the roots the treatment desired, as then fermenting materials may be used. The roots of plants in pots being more under control, can be fed, the setting is more readily done and growth is kept more confined, allowing light and air to circulate freely round the plants. Late plants in pots or restricted spaces need more liberal feeding. Bone meal or spent manures may be used to lighten heavy clay soils. In sowing at this season raise the plants in frames as close to the glass as possible, a sturdy growth from the start being essential, and in planting be careful not to injure the stems, or canker will be troublesome.

G. Wythes.

KITCHEN GARDEN.

PEAS IN DRY SOILS.

The Pea crop this season has had a fight for existence in poor gravelly soils. In many places I note insects are attacking the bine, and, should rain fall in quantity, mildew will soon finish the work of destruction, and the late crop will be a poor one. Gardeners are often to blame in a great measure for failures, as the Peas are often sown so thickly that it is impossible for the plants to obtain the necessary food, especially in such seasons as we are experiencing. It may be said, why advise thin sowing when, perhaps, half the seed does not germinate? Most growers can at a glance tell if the seed is good. I admit it is not always as well selected as one could wish, but, from my own experience, I should say there are few vegetables more troublesome to rogue. To get a true stock is more difficult than many imagine. I was much amused the other day at being asked to explain the cause of failure of some rows of Peas sown on a sloping bank in soil which had not been manured for three years. The questioner stated that the seedsman was at fault; whereas the crop germinated well (indeed, too well); as if only half the seed had

come through the soil the other half would have done better. I admit sowing on banks may be a gain for the earliest crops, but such positions for tall Marrow Peas are not suitable, as the moisture when given all runs to the lowest point. It is well known how well Sweet Peas thrive when sown thinly and in rich soil; whereas when crowded the flowers are much smaller and soon over, and anyone would think the produce a different strain altogether. Some Peas may not be suitable for the soil, as, for instance, when I lived in the midlands, Veitch's Perfection was the best Marrow Pea, and grown in large quantities from June till September; whereas now in a light soil on gravel it is a bad cropper and not worth sowing, so that it is well to take varieties into consideration and grow those which do thrive.

Varieties.

A few words as to varieties may not be out of place. I do not consider the small white kinds, such as Extra Early or Early Sunrise, pay for growing, as we have now so many really fine varieties and of equal earliness. Gradus is a very fine early Marrow and a great advance on the older types. This in a dry season on a sloping bank was fit for use in twelve weeks from time of sowing and not protected in any way. This is one of the late Mr. Laxton's hybrids, and one he told me he considered the earliest and best of the many he had raised. With me it produced very heavy crops, in addition to being early and of good eating quality. Another Marrow variety which will doubtless come to the front is Sutton's Seedling Marrowfat, very dwarf—this season only 1 foot high—pods containing six to nine Peas. This I grew for the first time this season, and it was very fine, doing well in spite of the drought. As a forcing variety in pots it cannot be excelled. Another good dry weather Pea is Stratagem, a very fine flavoured kind and heavy cropper. It is a midseason Pea and invaluable in such summers as this. Daisy, a second early, 15 inches to 18 inches high, is a valuable new Pea, very free and noted for its good quality. This sown on light soil early in March follows Gradus and other first early kinds, one of its parents being Stratagem. For July cropping my best variety is Veitch's Main-crop, a very fine vigorous variety, pods large and the growth not too tall. This year it promises grandly.

G. Wythes.

Turnip Cardinal.—This variety is distinct from most others, having a deep cardinal colour, which not only appears on the top, but also covers the whole root. Of course, I do not recommend it on account of its novel colour, but as a good variety in hot seasons and as a variety that does well in most soils. The Cardinal is of medium size, flat, with very short top, and of fine table quality. It is one of the best varieties I have yet grown on hot, dry land, not running to seed like some early kinds, and being quite sweet and solid at the time I write. It has been fit for use since the end of May. The Cardinal has a strong tap root, this doubtless protecting it from drought, and having thick, spreading foliage the root is shaded. I have not tried it for late sowing, as Red Globe is the variety I rely on.—G. W.

Lettuce in hot weather.—Those who require Lettuce in quantity have to adopt various means to produce good material for every-day cutting, and the usual system of planting out of the seed beds cannot be carried out, as the plants in light soils suffer badly in hot weather. The plants are often sown much too thickly and do not lift readily; indeed, the tap root is generally broken when removing, and the plants get such a check that they require much attention in the way of shade and moisture to get them into a growing state, and often when they make a start they bolt. The best way to secure a long succession is to sow very thinly every three weeks in rich land, and my plan is to drop half a dozen seeds from 9 inches to 1 foot apart in flat drills 3 inches deep, and when the seedlings are above the soil to thin to the strongest; the thinnings may be planted on a north border. The Celery ridges are very good for summer sowing. In summers similar to the one we are now experiencing planting out is out of the question, as so much time is taken up in watering and looking after the crop. As Lettuce of first-rate quality is more appreciated in hot weather it is well to give ample attention, and thus secure constant supplies. For midsummer I find none equal to a good type of Cos, such as Superb White, a large variety, which folds in closely and is a long time before it runs. The older Ivery's Nonsuch is still a very fine dry summer Lettuce and of very good flavour. A great favourite of mine is the Mammoth White or Balloon Cos, a grand summer variety with large firm hearts, and one of the very best of the newer types. This I have grown since 1893. Those who do not sow so often as advised, and have unsuitable soil or little moisture, would do well to use cow manure instead of other kinds. It is a valuable hot weather manure, retaining moisture longer. It is also advisable to sow on the flat, and for July supplies under a north wall.—G. W. S.

EARLY CABBAGES.

I was surprised to read "A. D.'s" note on the dearth of early Cabbages in the London district, as I never had a more satisfactory lot than I have this season in this garden, and not a single runner amongst them. I rely on two varieties for early cutting, these being Ellam's Early and Mein's No. 1—the former, as is now well known, being a neat little Cabbage of excellent flavour, and Mein's No. 1 of larger growth, but equally as early. Mein's No. 1 can be cut either as a small early, or, by waiting a week or two longer, as a later and larger Cabbage. This is certainly an advantage, for whereas Ellam's would burst if left too long, Mein's No. 1 would go on increasing in size for a considerable period. I should think this variety would make a good market Cabbage. As to its hardiness there cannot be any question, and to my mind it supplies what "A. D." considers to be wanting. If "A. D." could induce any of his market gardening friends to give this variety a trial, I do not think they will be disappointed. For a private garden a good plot of Cabbage is of considerable value, as by a little judicious management a succession of Cabbage sprouts may be had without any trouble, beyond keeping the ground free from weeds and decaying foliage. Ellam's, however, is not a good variety for turning off an abundance of well-flavoured sprouts, but Mein's No. 1 is. The best variety I find in this respect is the Nonpareil, and Enfield Market is another excellent variety for secondary cropping. To encourage a good succession of small heads, care must be taken in cutting only to take the centre heart, leaving as many of the lower leaves as possible, as from each leaf a small head will form. As long ago as I can remember it was an old custom after the head was cut to trim off the leaves and cross-cut the stump. Leaving as many leaves as possible is the best plan to follow so as to secure a succession of sprouts. Large old heads of Cabbage are liked by nobody, being hard, strong, and yellow-hearted, so much the most profitable plan is to cut off the heads so as to encourage the later growth.

There is also much in the selection of suitable early varieties to escape the evil of bolting. Early sowings of such varieties as Enfield Market and Nonpareil will surely end in the greater bulk bolting. Ellam's Early and Mein's No. 1 are practically exempt from this evil. For the earliest batch and for this district I find the middle of July a suitable time for sowing. As seasons vary so, it is as well to have two strings to your bow, and as a safeguard against any emergency another sowing is made at the end of the month. It is quite as much an evil to be too early for the season as too late. It can easily be seen when the time comes for planting whether the plants are too large and forward to winter safely. The seeds must be sown very thinly over a good extent of ground according to the quantity of seed to be sown. Crowding the plants into a square yard or two of space will surely spoil them. The most suitable time to sow Enfield Market and Nonpareil is from the 16th to the 20th of August.

A. Young.

LATE-PLANTED WINTER VEGETABLES.

It sometimes happens that late-planted Broccoli, Borecole, Savoys, and such like prove nearly, or quite as serviceable as any got out much earlier. Especially is this the case when the plants have also been raised late, or prepared on poor ground quite in the open. Those raised early and thickly in the seed-bed—the positions being sheltered and the soil fertile—are apt to become very large if not crowded, or else, if crowded, very leggy, neither class of plants moving well. Starvelings from the open fields or poor allotments, if drawn a few hours after either a soaking rain has fallen or a good watering has been given, take to their fresh quarters surprisingly quickly, flagging but little in quite the hottest weather. Very leggy plants and any over-grown are scarcely worth the trouble of planting, or, at any rate, are very inferior to those raised late or sturdy in character. Early and second early Potatoes will in far too many cases prove a light crop. Two or three, or, it may be, five or six fairly large tubers are found at the roots of most varieties, and numerous small ones not much larger than Peas. If they are left undug in order to give the latter a chance of growing larger, there is every likelihood of the large ones "growing out," and probably an attack of disease crippling the crop generally. Better, therefore, lift at once and crop the ground closely with winter vegetables. If justice has been done the Potatoes, cleaning, levelling over, and firming the ground is all the further preparation needed for the successional crops. Many Peas and Beans will also come off the ground early this season, and, though late in commencing to ripen, Strawberries have also failed quickly, this, where an early clearance of old plants is made, admitting of winter vegetables being planted in close succession. There ought to be no ground lying idle in a kitchen garden unless particularly wanted and undergoing special preparation, say, for winter Spinach. At the same time it should be remembered that vegetables generally, and the Brassica family in particular, are great exhausters of fertility, and if we crop closely and heavily we must follow the example set by market growers, that is to say, manure heavily. Grossness is objectionable in most winter vegetables, but I would yet dig in manure for them rather than attempt to produce them on very poor ground.

In order to have a full, heavy crop of Brussels Sprouts, the bulk of the plants of these ought now to be growing strongly where they are to remain, though I have known batches of plants put out as late as the middle of July give excellent late crops of sprouts. This late planting is most desirable where the soil is not equal to sustaining plants throughout a full season. Borecole late planted will at least give a fairly strong top and some few greens, but if the Asparagus Kale is planted or even sown now where it is to grow Spinach fashion, a capital supply of suc-

culent greens will be had next April, May and June. The latter is one of the hardiest greens and may be either planted or thinned to a distance of 12 inches apart in rows 2 feet or rather less apart. After the experience of the past winter we ought to find as much room as possible for the hardy Borecole or Kales, notably the Cottager's Kale and the Arctic Kales, as all these did good service and can always be depended upon. Not so Broccoli. I suppose we must always try to grow some of these, but their culture must be regarded in the light of a lottery. Either there are more Broccoli available than we know what to do with, or else there are too few or none to be had after the early autumn varieties are over. Veitch's Autumn Protecting Broccoli I consider should be much the most extensively planted, and any put out now on somewhat rich firm ground would most probably be available for storing under glass in November, hearting in some time in January or February. It must always be borne in mind that it is one of the least hardy Broccoli. Other varieties can be prepared to withstand a moderately severe winter. Ground newly cleared of Peas, Beans and Strawberries is a good site for these. Holes may be formed with the aid of a crowbar, or, better still, drills be cut with a heavy hoe and filled with water (twice if necessary), after which it will be possible to plant with either dibber or trowel. The rows may be at the same distance apart as the centres of the spaces between the late rows of Strawberries, and the plants 2 feet apart in the rows, as there is not much likelihood of their overgrowing each other. On the contrary, they will be short-stemmed, compact, and, to a certain extent, frost-resisting. I do not promise anyone following this advice, or who plants late on solid ground, large hearts next winter or spring, but he ought to have some quite large enough for most tables. Late-raised and late-planted Broccoli are usually hardier than any already growing strongly where they are to remain are likely to be, and if only leggy, early-raised plants are available, do not sink them in deep holes up to the leaves, but instead of this plant in a sloping direction, all the stem being covered with soil.

Now is a good time to plant Chou de Burghley extensively. Planted early on rich loose ground, a coarse, next to useless crop is the result. We want hearts of the size of Ellam's Dwarf Spring Cabbage, and during November and December they would then be fully appreciated. In some seasons they pass through the winter uninjured, the hearts remaining sound and good for a long time after they are fit to cut. Savoys, again, are of little value when overgrown. Who cares for the great coarse hearts grown in so many gardens? Very few, probably, or otherwise fewer would be left to rot on the ground. Those of the Tom Thumb type are by far the best in point of quality, and next to these I place Dwarf Ulm and Gilbert's Universal, the Green-curled and Drumhead being grown principally because they heart in later. W. I.

Veitch's Earliest Marrow Pea.—There is little excuse for growing Peas that are deficient in flavour on account of their earliness, as some of the more recent introductions in the early section are quite first-rate in this respect. The variety named above, which I am growing for the first time this year, has pleased me much, as its high quality is most marked, the Peas being exceptionally sweet. Probably it is not such a heavy cropper as some of the early kinds, but it has given a fair crop in spite of the drought which had continued for so long until a day or two ago, and which tended to shorten the bearing season of early Peas. One of its good qualities is that it hangs for a long time after being fit to pick without getting hard or losing its sweetness and deep green colour. As a proof of its earliness I sowed in an open quarter on March 11 and picked a peck of good Peas from a row about 15 yards long on June 11, just three months from sowing. Altogether, I think it a worthy companion to that excellent variety Chelsea Gem. The Peas individually are not large, but the flavour is equal to that of the best Marrowfat kinds.—J. C. Tallack.

Walcheren and Early London Cauliflowers.—I have been much interested in the recent correspondence on the merits of these two Cauliflowers. I must throw in my lot with those who maintain that Early London is both distinct from and earlier than Walcheren. I have grown Cauliflowers for many years for early work, and have always considered these two varieties distinct, Early London being the first to turn in by some ten or twelve days. Lately, however, I have been so annoyed by buttoning in Early London that I have decided to abandon its culture. I think the fault lies in the bad stocks of seed owing to the great demand for this particular variety. Walcheren is a grand Cauliflower, and for successional work right through the summer I know of none to surpass it.—J. Crawford.

Planting green crops.—Planting Cabbages, &c., will have been retarded owing to the drought, and unless special care be taken of the plants of the Brassica tribe in the seed beds, they will be much drawn and deficient of fibrous roots. It is now full late to advise transplanting or pricking off into lines to get dwarf plants with plenty of roots. The plants, if at all crowded in the seed-beds, get more injured at this date than earlier, as being much larger each one is fighting for existence, with the result that all but a few outside plants are crippled. To avoid this it is well to plant out though we have a tropical summer, as the longer the work is delayed the more the plants suffer. Much the best results are secured by planting medium-sized plants with ample roots, as the larger ones are so much affected by lifting. It may be asked, How can one plant in such a season with the soil like dust? My remedy for such is deep drills, these being filled the evening before planting with water; then plant and water when required at night. This will be far better than allowing the plants to run to waste in the seed bed. When we do get the much-desired rain, the plants, with the great warmth in the soil, will soon make up for any delay. By making drills a man with a large water-pot can go along each quickly. It is surprising how long the drills retain the moisture when once well soaked.—G. Wythes.

EARLY CAULIFLOWERS.

Mr. Wythes' most interesting article (p. 456) will do something to clear up the confusion that now obtains with regard to the different varieties of Cauliflowers and their synonyms. Personally I beg to thank him for it, and will, if I can get it true, follow his advice to grow the Dwarf Mammoth Erfurt when sowing this autumn. My experience with the Erfurt has been somewhat similar to that of Mr. Wythes with the Early London in that the seeds which I obtained on two or three occasions must have been from an inferior stock, the heads produced being loose and ungainly, and this decided me to stick to a good strain of Early London. On the other hand, what was sent to me as Snowball was too small for sale, though valuable to provide a few early dishes for private use. In the Chiswick trials Snowball and the Erfurt varieties were classed together. This trial of varieties at Chiswick loses something of its value, as Mr. Wythes says that it was not used as a test of earliness—an important point with Cauliflowers when we remember that their value is greatly enhanced by their earliness, as it is not unusual for prices to drop 4s. or 5s. per dozen within a week, or directly Peas come into the markets in quantity, and it was this that I had in my mind when writing my earlier note on the subject. I am pleased to see that Mr. Young supports my view that Early London is earlier than Walcheren. It has proved so with me each year. Walcheren, as I grow it, besides being later, runs taller and proves a most valuable kind for succession, though if seed of The Pearl was a little cheaper and not quite so scarce, I should prefer this to all others as a second early. The method of treating autumn-sown Cauliflowers adopted here is to sow a little later than is generally recommended, leaving the young plants in the seed bed until sharp frost threatens. They are then lifted and replanted about 6 inches apart in good soil in one of the pits used for growing Cucumbers in summer, and here they winter very well, losses from cold or from early buttoning being rare. A mild time when the ground is in good condition early in spring is chosen for planting, and no hand-lights are used for protection. I choose a warm border under a south wall for the plants and protect with a few twigs of Spruce or Laurel. This year I put out in this way about 280 plants on March 20, and these have been most successful. In a colder and heavier soil I prefer potting up the plants in autumn, but they lift well with me and take readily to the light and sandy garden soil. I should be glad to see from any of your readers notes that may help to clear up the confusion which there is now as to names and synonyms. J. C. Tallack.

Orchids.

NOTES ON ODONTOGLOSSUMS.

If it were possible to ascertain the number of plants under cultivation belonging to each genus of Orchids, these would probably be far ahead of all others. The numbers of such as O. crispum would be simply overwhelming, and the reason of this is not far to seek. Being so thoroughly at home under cool treatment and so beautiful when in blossom, they are naturally much sought after by all classes of Orchid growers, and as the demand is so heavy, nurserymen and others engaged in importing find it to their interest to seek such plants. The risk of having the plants left on hand is reduced to a minimum, and this is no small matter to those who have to stock them. The majority of Odontoglossums are not by any means constant in their time of flowering, but this is an advantage rather than otherwise, as it enables anyone with a fairly good stock of plants to keep up a fine display over a long season. The first six months in the year are the principal Odontoglossum season, though many of them are still in full beauty, and others will carry on the display until the end of the year. It is this latter section that I am thinking of more especially just now. A very beautiful kind, quite distinct from all of the crispum and similar types, is

O. bictonense, the oldest species in cultivation, and a remarkably free-flowering plant. This when in good condition frequently produces spikes over 2 feet in length, bearing many flowers, each about 1¼ inches across. These are of varying shades of yellow on the sepals and petals, with brown or purple spots, the lip lilac or rosy pink, heart-shaped, and irregularly frilled at the edge. This is of very easy culture, and although liking rather more heat than the crispum set, is not fastidious in this respect. It is a native of Guatemala and Mexico, and was introduced about sixty years ago. The var. superbum is said to be a greatly superior form, with darker coloured flowers.

O. grande is the largest flowering in the genus, and one of the showiest and best known. This is one of Mr. Skinner's introductions from Guatemala. The blossoms are produced on erect

scapes, each bearing from three to eight, these being upwards of 6 inches across. The sepals and petals are bright yellow, transversely barred with rich chocolate and brown, and they have a shiny, varnished appearance. The lip is whitish with brown lines and spots. The warmest and shadiest position in the Odontoglossum house must be given O. grande, and it also delights in a rough, open compost. The pseudo-bulbs and leaves seemed more than usually attractive to slugs, these pests attacking the young growing shoots with great avidity, frequently causing a great amount of mischief. O. grande usually rests awhile after flowering, and it ought not to be excited until it breaks naturally, unless it is desired in flower earlier than usual with a view to succession. If kept in a temperature of not less than 52° during winter and induced to make a free growth during summer, it never fails to flower freely during late autumn or early winter. O. grande superbum, O. g. magnificum, and O. g. pictum are all good, well-marked varieties of this favourite Orchid.

O. INSLEAYSI greatly resembles O. grande in habit and manner of growth. The flowers, smaller and produced earlier in the season, are yellow in ground colour, blotched with red, more especially on the sepals and petals. The variety leopardinum has a very richly coloured lip, bright yellow with crimson dots around the margin, the variety splendens being a rare and lovely kind with large, richly-coloured flowers. The type is a native of Mexico, introduced about fifty years ago. Both this species and

O. SCHLIEPERIANUM, which it greatly resembles, will thrive with O. grande; indeed the latter has been described as a variety of this species, viz., O. grande pallidum, but it is usually known by the above designation. The flowers are very pale yellow, the sepals and petals being blotched and barred with purple, the lip small and marked with brown. This was introduced from Costa Rica in 1836.

O. URO-SKINNERI was sent by the gentleman whose name it bears from Guatemala in 1854. It is a strong-growing, easily-grown plant now in flower in several collections. The blossoms are each 3 inches across, the segments yellow blotched with brown, the lip rosy purple and white. These are produced on tall spikes, and last a long time in full beauty. It requires abundance of water at the root, good drainage, and a cool moist atmosphere all the year round.

O. HASTILABIUM is usually in flower during August, and therefore often used for exhibition. It produces a succession of flowers upon the upright branching spikes, these being very fragrant and upwards of 3½ inches across in the best forms. The sepals and petals are creamy white overlaid with brownish purple, the lip purple at the base, pure white in front. This requires more heat than any other species, being found naturally at a low elevation in New Grenada. The pseudo-bulbs and leaves of this species are very pale green, the latter broad and sometimes as much as 15 inches long. Introduced in 1843.

Besides the above, many of the varieties of O. Rossi, O. maculatum, O. Edwardi, O. gloriosum, and others occasionally flower in the autumn, so that there is no lack of variety where a number of plants is grown. Great care is necessary with them all while in bloom and afterwards, and it may be taken as a general rule that from a fortnight to three weeks is quite long enough to leave the flowers on the plants, many of them lasting quite another fortnight when cut. R.

Cypripedium Sedeni.—Although of hybrid origin, this lovely plant is, fortunately, plentiful enough. It is extremely popular on account of its free-flowering habit and handsome appearance. The leaves of C. Sedeni are each about 15 inches in length, deep green, gracefully arched, and on healthy plants very attractive. The scapes rise from the centre of the growth, producing many flowers in succession. These are each about 3 inches across, the sepals being whitish, the petals twisted, bright rose, margined and sometimes streaked with white. The pouch is round, crimson in front, the throat white, with crimson spots. It belongs to the Selenipedium section of the genus. The plants may easily be kept in a thriving condition by ordinary care, and, being a vigorous-growing plant, it is easily propagated. Indeed, it occasionally throws up a kind of upright rhizome with a growth at the end, and advantage may be taken of this to increase the stock. The best time to repot Cypripediums is in early spring, before the plants commence to grow. They may, however, if in bad condition at the root, be safely potted at any season, provided they receive careful attention afterwards. Such plants must have all sour and rotten portions of the compost removed, and, after washing the roots thoroughly in tepid water, cut away all that are decayed and allow them to dry before repotting. The compost best suited to its requirements consists of fibry loam and peat in equal proportions, adding a plentiful sprinkling of small crocks and charcoal, with enough chopped Sphagnum to make the mass spongy and light. Thorough drainage is essential, as a full supply of water is needed while growing. Spread the roots out carefully and work the compost among them, not raising the plants above the rim, as is usual with most Orchids. C. Sedeni is a restless Orchid usually, but resting can be induced by lowering the temperature a little during winter. It is not necessary to dry the plants at the root, as this serves only to weaken them. The Cattleya house temperature suits it well while growing, and after repotting, the plants may be dewed over with the syringe until the roots are taking to the compost, when they will need watering almost daily.

ROSE GARDEN.

ROSE NOTES FROM COLCHESTER.

THE lamentations that went up as the severe frost gave way might have led us to suppose that there were very few Roses left in the land, but the reverse is quite the case, and when calling at Mr. B. R. Cant's recently we found his noted Rose fields gay with colour. Of course, losses have been general and great, more so as regards old plants, but the dormant buds of last year's budding stood the cold, and now again we see the familiar nursery lines with very few blanks. There was no prettier picture in Mr. Cant's nursery at the time of our visit than the hedges and fences covered with the old cluster Roses, and it is a pity that they are not more used in this way where pretty dividing lines are wanted. Our chief object, however, was to see what was new, and although no notable addition to the great Rose family can be chronicled, several kinds of promise were seen in good form. Among H.P.'s, Mrs. Sharman Crawford and Marchioness of Downshire are both distinct with full, well-formed flowers in shades of pink, those of the latter variety borne on very erect strong shoots. Marchioness of Dufferin, also pink and possessed of a good sturdy habit, is a new Rose of considerable merit. Clio, the new blush Rose sent out by Mr. W. Paul, is finding favour, and deservedly so, for whilst it is up to exhibition form, it has the most essential quality of robust growth, making large plants that will cover themselves with fine flowers. It is a most valuable addition, as it flowers freely, opens well, and in its soft-blush white shade gives us a colour by no means common in this class. Marquise de Litta (Pernet and Ducher, 1893) Mr. Cant thinks a promising new Rose. It has a large petalled flower, of a rosy cerise colour. Mrs. Harkness, or Paul's Early Blush, was conspicuous with many flowers, and will certainly make a gay garden Rose; whilst Jeannie Dickson, though not now considered as new, is a recent kind that may be highly recommended for planting in groups in the garden. Margaret Dickson we noted carrying fine flowers on some old cut-back plants, whilst the growth was most robust.

Among the Teas the American variety named Golden Gate had some splendid flowers, and is clearly a worthy addition if it maintains the fine form in which we saw it. The name, however, is singularly inappropriate, as there is nothing of a golden character about it. It is of a pale cream colour, shading to deeper yellow at the base of the petals, but flushed with faint pink at the edges. Corinna was easily distinguished from the rest by its distinct colour, and it is very free-flowering. Medea, too, seems to be gaining favour. Kaiserin Augusta Victoria (Hybrid Tea) is a grand Rose, with all the refinement and beauty of a true Tea, carrying full, shapely, cream-white flowers on strong shoots. Mme. Pernet-Ducher, of the same class, is a Rose to plant for effect, the plants covering themselves with great clusters of bloom, the buds rich nankeen-yellow, the expanded flowers nearly white. Of quite an opposite colour is Marquise de Salisbury, a new kind much praised last year, but again justifying all that was said in its favour—a perfect marvel of profuse bloom. The little Polyantha varieties have come through the winter safely, and although free at all times, we never saw them promising a more abundant bloom than here, the plants being invisible beneath their mounds of buds and tiny flowers.

Budding will now be general, and we must not fail to work the hedge Briers as the shoulders come ready, as the present dry season is already causing many of them to hang or bind. When I wrote last it promised rain here, but none fell, and we are now very much parched up, more so than in 1887 or 1893.—RIDGEWOOD.

Rose W. A. Richardson.—Your note (p. 429) on this Rose is opportune. In this neighbourhood many fine plants of it are to be seen growing up the front of cottages. I never saw any Rose bloom more freely, and this season the leaves can hardly be seen for flowers. It requires so little pruning that it is just the Rose for cottagers to plant; another point in its favour is the easy manner in which it grows from cuttings.—E. M.

Rose Renoncule.—Away from cottage gardens and nurseries, how seldom do we see this old Rose. It is one of the best of the climbing section for covering a wall, fence, arch, or pillar. On the front of a cottage in this village at the present time a grand plant of it is now in bloom. It is fully 20 feet high and quite as much across in the widest part. The flowers are after the style of those of a Ranunculus—white tinged with pink, hence its name. The dark green foliage with the red tinged bark of the branches enhances its value. It grows freely from cuttings.—E. M., *Swanmore Park, Bishop's Waltham.*

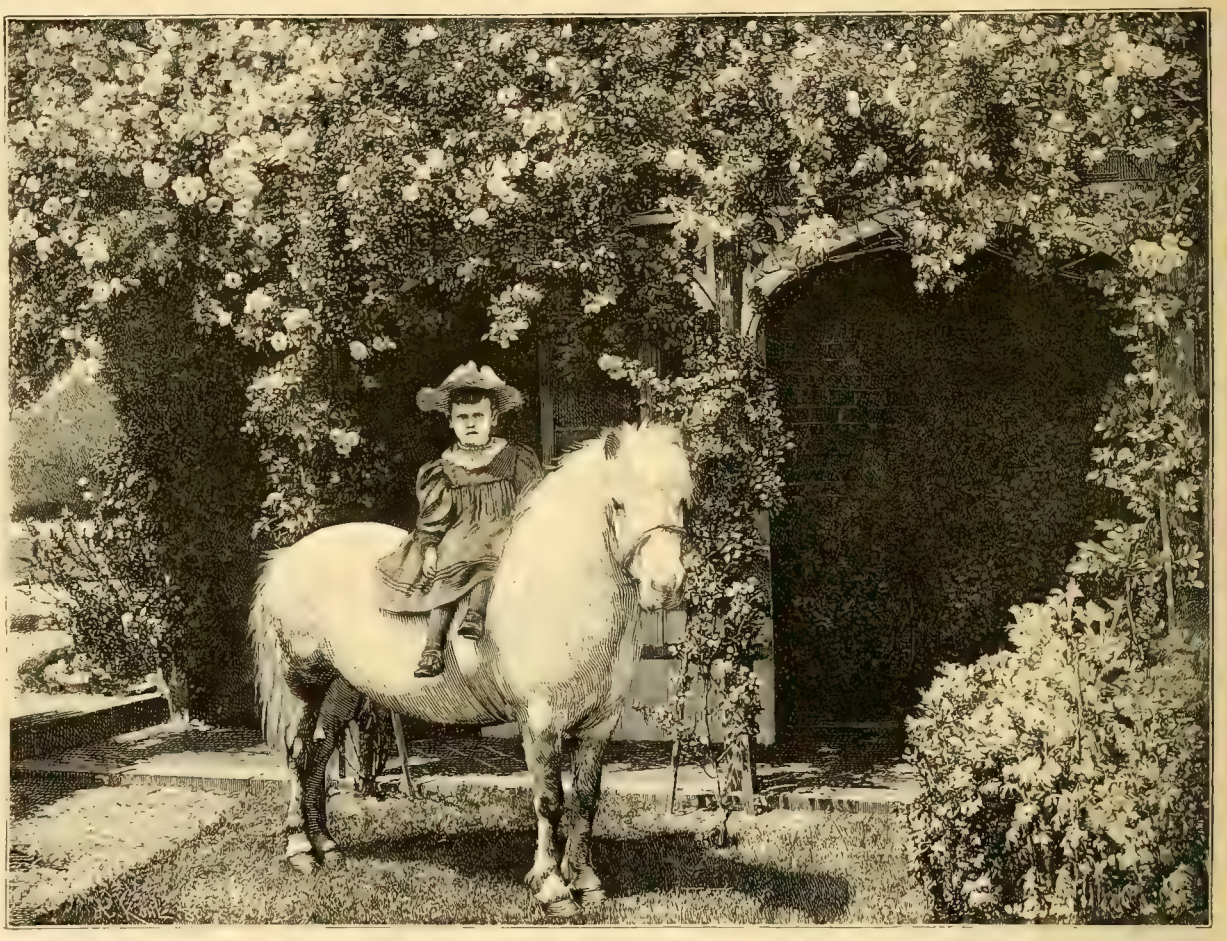
Cluster and single Roses.—Few gardens contain even a tolerably good collection of these Roses. Although the beautiful Hybrid Perpetual, Tea and Noisette Roses are so generally cultivated, there is yet room for a representative collection of these. In a collection I lately saw I noted the following: the Blush China, bright pink, singularly beautiful; Harrisoni, with its fine golden yellow flowers, most telling in a mass either upon the plant or in a vase, and Brennus (belonging to the Hybrid China section), brilliant crimson in colour, reminds one of that charming H.P. Marie Baumann, a really fine pillar Rose. Rampant, pale pink, has neat little blooms freely

produced in clusters; and Red Damask is very showy, semi-double, reddish crimson. Village Maid resembles York and Lancaster, except that the stripes are much darker; Dundee Rambler, blush white, well represents the Ayrshire type of Rose; and Fellenberg, with clusters of rosy red blossoms, is a most charming variety. Mme. Plantier bears pure white blooms in large clusters and is suitable for pillars, but is, perhaps, better described as a bush. Microphylla, the single white form of the curious prickly-hipped Indian Rose, is pretty; likewise Ruga, one of the Ayrshire section, of a pale flesh colour and very fragrant. Félicité-Perpétue is well known, and Vivid, crimson, is a capital pillar Rose. Waltham Climber No. 1, with rose-coloured blossoms, is a free, bright kind; and Sweet Brier Lady Penzance is one of the best of the new Sweet Briers, the colour copper, with a peculiar metallic lustre and bright yellow at the base of each petal.—E. M.

Rose Crimson Rambler. — At Gunnersbury House this Rose is considered well worthy of a place in the conservatory, and Mr. Hudson grows it to perfection. It is suitable for pillars or for clothing the bays, and in either case must be grown very strongly in order to have great sprays of bloom, or such as can be cut for large vases in abundance. It is a summer Rose, and Mr. Hudson after the flowering period is over cuts back the wood to below the flower-breaks, thereby causing the formation of the requisite strong growth for flowering the following season. This Rose also succeeds admirably in pots. —I.

Rosa rugosa Blanche de Coubert. — This is a charming variety of the old Rosa rugosa, in which the blossoms are of that beautiful pure satiny white common to Rosa rugosa alba, but the flowers of this newer form are double, or, perhaps, by comparison with many other Roses, semi-double would be the best expression to use. The blossoms are certainly very charming, without any suspicion of lumpiness. A great deal of the value of R. rugosa is owing to the fact that, left to itself, it will form a handsome bush and soon attain considerable dimensions by reason of the sturdy suckers, which are pushed up so freely. These newer varieties are, however, generally grafted or budded, so that they cannot increase in the manner common to this Rose. Though plants on their own roots are, of course, preferable to others, I have seen very good results attained in the case of the single white variety (when it was scarcer than it is now) by layering the shoots directly they were long enough, and after that allowing them to remain untouched. The result was that each rooted layer pushed up suckers of its own when sufficiently strong, and in this way a bed of the white variety on its own roots was established.—T.

Hardiness of Tea Roses.—Now that my Tea Roses are in full bloom and better than I have had them before, I should like, in order to encourage others, to say that though the glass, which is alongside of them, fell one night to 2° and many nights to 7° and 8°, out of about 100 dwarf Teas, including even such tender kinds as Niphetos, Devoniensis, and Comtesse de Nadaillac, I only lost two plants. They are mostly grown on beds raised at planting some 2 feet, and now standing 1 foot above the level of the lawn, and had no other protection but a very heavy mulch of manure. The whole, including the hardiest, Mme. Lambard and Marie van Houtte, &c., were when pruned to the green wood almost invisible over the mulch, which was mostly left on the beds for another month or more, but all are in bloom or showing good buds, and many have very long shoots. They were most of them exposed to the full blast of the north wind off the hills, but rather protected by the house, &c., from other quarters. I have not been much troubled this year by either aphis or caterpillars, but, unfortunately, my few Hybrid Perpetuals have at this early season already some mildew. Crimson Rambler has proved exceptionally hardy, as the twelve feet shoots, trained over an open trellis through which the north wind howled, did not show the least sign of frost even to their tips, and every eye is now a mass of buds. Ophirie alongside was badly injured, as likewise an old white Cluster Rose. What suffered most were the plants on the lowest wall of the house, where the sun was so hot that there was a variation of temperature of 40° in a few hours. Several perennials which I have had here for many years have entirely disappeared.—J. R. D., *Reigate.*



Roses in a Surrey garden. Engraved for The Garden *from a photograph sent by Mr. A. Trower, Wiggie, Redhill, Surrey.*

ROSES ON A SURREY HOUSE.

The Rose trees shown in the engraving were planted on the south side of the house some ten years ago, one on each side of a French window, the one to the left being a white Banksian, the one on the right a white Ayrshire. After they were planted about two years I had occasion to build on that side of the house a tile-roofed verandah some 5 feet wide and without any light overhead, and also paved with tiles, leaving only a very narrow border against the Rose trees. As the trees grew I carried the long shoots across overhead, up under the eaves, and thus on to the roof of the verandah, and I am pleased to say that they have for several years now been a great source of pleasure to me as June comes round, being each summer covered with hundreds of buds. Nothing could look much prettier than the Banksian the day the photograph was taken (June, 1894), each tiny shoot having its several fairy-like, pinkish white blooms and buds waving gently in the breeze. The Ayrshire is rather later, and, as can be seen, was not in its full beauty. I am pleased to say that in spite of the severe winter neither of the trees has suffered to any great extent; this is no doubt owing to the protection they get from the verandah. The Rose trees growing up the pillars have since been planted, and are not yet up to the roof. As the two Roses under the verandah never get any rain, I occasionally give them some water, but the border is too narrow to give them any manure—in fact, they do not require any. A. Trower.

Redhill.

SHORT NOTES.—ROSES.

Single Rose Reine Blanche.—This is one of the best single-flowered Roses, and in the bud state it is indeed charming, the ivory-white, bright carmine-edged shell-like petals peculiar in colour and most

pleasing. It makes splendid button-hole bouquets, as the buds are so long in opening.—E. M.

Societies and Exhibitions.

NATIONAL ROSE SOCIETY.

Crystal Palace, July 6.

It would be almost unfair in such a season as this to contrast the exhibition of last Saturday with preceding ones, yet there were many more entries than we might have expected and good competition in some of the classes. The flowers were, however, rather small, and lacked the fulness and freshness that characterise Roses in an average season. Especially was this noticeable in the crimson and dark-flowered varieties, but the light coloured kinds were in many instances finely shown, notably Her Majesty, which received the medal for the best Hybrid Perpetual in the show in both nurserymen's and amateurs' classes, two fine flowers of great depth and superb finish being shown by Mr. B. R. Cant and Mr. E. B. Lindsell. The two medal Teas were also magnificent flowers of their kind, Mr. Frank Cant receiving the coveted award in the trade classes with a very fine flower of Comtesse de Nadaillac, and the Rev. A. Foster-Melliar in the amateur classes with a large, deep-coloured flower of Maréchal Niel. No new Rose appeared of sufficient merit to receive the gold medal.

Nurserymen's Classes.

In the great class for seventy-two distinct varieties, one flower of each, there was again a very close fight between Mr. B. R. Cant and Mr. F. Cant, the noted Colchester growers, the former being eventually adjudged the winner of the trophy and first prize, but only by four points. The best varieties in this exhibit were Her Majesty (the medal bloom), Susanne M. Rodocanachi, Duke of Fife, Duke of Wellington, Captain Hayward, La Fraicheur, Marie Baumann, Etienne Levet, White Lady, Boildieu, Gustave Piganeau, Charles Lefebvre, Comte de Raimbaud, and Countess of Rosebery among H.P.'s. Luciole, Ernest Metz, The Bride, Mme. Cusin, and Maréchal Niel were the best Teas. Mr. Frank Cant's stand had some notable flowers; in addition to the medal Tea we noted Mme. de Watteville, Catherine Mermet, La Boule d'Or, Innocente Pirola, Captain Hayward, A. K. Williams, Gustave Piganeau, and Comte de Raimbaud. For forty distinct varieties, three of each, the position was reversed, Mr. F. Cant being first with a fine, even lot, and Mr. B. R. Cant second. The best flowers were Her Majesty, Horace Vernet, three good blooms of this rich dark Rose, Marie Baumann, Victor Hugo, brilliant in colour, Duke of Fife, Marchioness of Dufferin, Marie Verdier, Reynolds-Hole, A. K. Williams, Salamander, and Gustave Piganeau H.P.'s, and The Bride, Ethel Brownlow, Niphetos, and Comtesse de Nadaillac, Teas. For forty-eight distinct varieties, single trusses, another Colchester firm came to the front, Messrs. Prior and Sons being first, their stand containing noteworthy blooms of Lady Mary Fitzwilliam, Victor Hugo, E. Y. Teas, A. K. Williams, Reynolds-Hole and Merveille de Lyon. The second lot came from Southwell. For twenty-four distinct varieties (single trusses) Mr. J. Mattock, New Headington, Oxford, was first, his best flowers being Her Majesty, Reynolds-Hole, A. K. Williams, Gustave Piganeau, Ernest Metz, and Mme. Hoste. Mr. S. Tresider, of Cardiff, was second. For twenty-four distinct (three trusses) Messrs. G. and H. Burch, Peterborough, were first with fine fresh flowers, Her Majesty, Merveille de Lyon, Horace Vernet, Earl of Dufferin, Mme. de Watteville and Innocente Pirola being the best. Messrs. Prior and Sons, Colchester, were second. An extra class for exhibitors who only showed in the above classes was for eighteen bunches of any H.P., Hybrid Tea and Tea or Noisette variety. Messrs. G. Paul and Son, Cheshunt, were first with excellent bunches of S. M. Rodocanachi, Abel Carrière, Alfred Colomb, Capt. Christy, Bacchus, Mrs. Paul and Etienne Levet. Mr. G. Mount, Canterbury, was second.

In the trade classes for Teas we missed the name of Mr. G. Prince, doubtless owing to the dry season. Mr. Frank Cant took premier honours in two classes, namely, for twenty-four distinct single trusses and for eighteen distinct, three trusses of each. The two exhibits had some lovely flowers, notably The Bride, Mme. de Watteville, Mme. Cusin, Souvenir d'Elise Vardon, Comtesse de Nadaillac, Ernest Metz, Ethel Brownlow, Edith Gifford and Maman Cochet. For eighteen Teas, distinct, Mr. J. Mattock was first with a fine box of fresh and lovely flowers, Mr. H. Merryweather, Southwell, Notts, being second.

Amateur Classes.

The leading prize for thirty-six distinct kinds, which carries with it the amateurs' challenge trophy, was deservedly gained by Mr. E. B. Lindsell, Bearton, Hitchin, with what was undoubtedly the finest stand of blooms in the whole show, a remarkable exhibit for such an extraordinary season. With every variety except one of high merit, it is hardly possible to single the best out for special mention. Her Majesty, the amateur medal bloom, was in this stand, and other fine flowers were those of Gustave Piganeau, Mrs. Sharman Crawford, Dr. Sellew, Mme. Haussman, A. K. Williams, Duke of Connaught, Souvenir d'Elise Vardon, Caroline Kuster, and Catherine Mermet. The Rev. J. H. Pemberton, of Romford, Essex, was second. Mr. Lindsell was again first for forty-eight distinct single trusses with another fine fresh lot, the second prize going to Mr. W. Drew, Uplands, Ledbury. For twenty-four distinct single trusses, Mr. J. Gurney Fowler, Glebelands, South Woodford, was first, and Mr. W. Boyes, Duffield Road, Derby, second. The Rev. J. H. Pemberton was first for twelve trusses of any Rose except a Tea or Noisette with A. K. Williams, Mr. H. V. Machin, Worksop, securing second place with Her Majesty.

The smaller growers again justified the changes that have been made to encourage them. Among growers of less than 2000 plants, Mr. W. C. Romaine, The Priory, Windsor, was first, his stand containing good blooms of Charles Lefebvre, A. K. Williams, Marie Baumann, A. Colomb, Innocente Pirola, and The Bride. The second prize went to Mr. A. Slaughter, Steyning. For eighteen distinct varieties, Mr. J. Parker, Oakfield, Hitchin, was first with a good lot, Mr. E. Mawley being second. The Rev. H. Berners, Harkstead, Ipswich, was first for nine single trusses of any Rose except a Tea or Noisette with a good lot of Mme. Gabriel Luizet. For eight distinct varieties, three trusses of each, Mr. E. B. Lindsell was first with fine flowers, Mr. W. C. Romaine being second. The Rev. J. H. Pemberton showed a good lot in the class for twelve bunches, any varieties, not more than seven trusses to a bunch. The best were Horace Vernet, Mrs. John Laing, Caroline Kuster, A. K. Williams, Marie van Houtte, and Bouquet d'Or. Mr. H. V. Machin was second. Among growers of less than 1000 plants, Mr. Whittle, Belgrave Avenue, Leicester, was first for nine distinct varieties, single trusses; Mr. H. Foster, Ashford, Kent, being second. For six varieties, Mr. P. G. Burnand, Reigate, was first, and Mr. Whittle second. Mr. Bateman, Archway Road, Highgate, was first among growers of 500 plants for nine distinct kinds, the Rev. H. B. Biron, Hythe, being second. For six varieties, Mr. E. R. Smith, Muswell Hill, was first, and Mr. R. J. Jeans, Isle of Wight, second. Mr. A. Evans, Marston, Oxford, had the best four varieties in trebles, Mr. W. D. Freshfield, Reigate, being second. The Harkness Cup and first prize for twelve single trusses, distinct, was again won by Mr. O. G. Orpen, West Bergholt, with a fine lot, in which The Bride, Kaiserin Augusta Victoria and Comtesse Panisse were exceptionally fine; Mr. P. G. Burnand was second. For six trusses of any Rose except a Tea, Mr. James Parker, Old Headington, Oxford, was first with Her Majesty; Mr. S. Price, Derby, was second. In the class for six varieties, open to amateurs who have never won a prize at a N.R.S. show, Mr. C. E. Shea, Foot's Cray, Kent, was first, and Mr. F. W. Campion, Reigate, second. Mr. Bowyer, Haileybury College, Hertford, was first for the same number in the class for new members of the society who have joined since last year's show, and Mr. S. Price, Derby, second. Mr. K. H. Gifford, Holyrood, Streatham, was first for six varieties grown within eight miles of Charing Cross, Mr. Smith, Muswell Hill, being second. For twelve distinct Roses grown within eleven miles of Charing Cross, Mr. M. Hodgson was first, and Mr. A. Beyfus, Norwood, second. The Rev. J. H. Pemberton was first in the class open to all amateurs for six new Roses, single trusses, showing Duke of Fife, Marchioness of Londonderry, Marchioness of Downshire, La Fraicheur, Mrs. Harkness and Mrs. Sharman Crawford; Mr. E. Mawley was second. Teas and Noisettes were also well shown by amateurs, Mr. Orpen winning the trophy and first prize for eighteen with an excellent lot, especially good being Francisca Kruger, Devoniensis, The Bride, Ernest Metz, Mme. Hoste, and Innocente Pirola. The Rev. A. Foster-Melliar was a good second, his stand containing the amateur's medal Tea previously mentioned. Mr. Orpen was also first for twelve Teas distinct, Mr. Bethune, Denne Park, Horsham, being second. Mr. Orpen also showed the best nine single trusses in this section, staging Francisca Kruger in lovely colour, and was first likewise for eight distinct kinds, three trusses of each, the Rev. A. Foster-Melliar being second. Among growers of less than 500 Teas, Mr. Conway Jones, Hucclecote, Gloucester, was first for twelve varieties and for four trebles, distinct kinds, whilst for nine varieties, Mr. R. H. Langton, Raymead, Hendon, won first honours. Mr. J. Parker was first for nine varieties among growers of 200 Teas, and for six varieties, the Rev. F. B. Burnside and Mr. G. W. Cook, Torrington Park, Finchley, were equal firsts. Mr. J. Parker had the best nine bunches, seven trusses to a bunch, and Mr. R. W. Bowyer, Haileybury, was first for six distinct varieties in the class for those who have never before won a prize at the society's shows.

Open Classes.

These were well filled, especially those for one variety. These classes are invariably one of the finest features of the show, and contain some of the best flowers. Mr. Frank Cant showed the best lot of Hybrid Teas, a fine exhibit, the varieties La Fraicheur, Danmark, Lady Mary Fitzwilliam, Grace Darling, Germaine Caillot, Viscountess Folkestone, Duchess of Albany, Caroline Testout, Augustine Guinoisseau, La France and Kaiserin Augusta Victoria. Mr. B. R. Cant was second. Mr. G. Prince had the best twelve trusses of a yellow Rose, except Maréchal Niel, showing one of his matchless stands of Comtesse de Nadaillac. Mr. Mattock was second with the same variety. Mr. G. Mount had the best twelve blooms of a white Rose in Merveille de Lyon, Mr. Prince being a good second with Kaiserin Augusta Victoria. For twelve trusses of a crimson Rose, Messrs. Townsend were first with A. K. Williams, and Mr. B. R. Cant second with Gustave Piganeau. Mr. B. R. Cant and Mr. G. Mount were equal first for twelve blooms of a dark crimson Rose, both staging Fisher Holmes. In the class for twelve flowers of any light Rose there were eleven exhibits, Messrs. A. Dickson and Sons, Newtownards, securing first place with their new Rose Mrs. Sharman Crawford, which is of a charming pink colour, but too thin and shallow to become a great Rose. Messrs. Croll, of Dundee, were second with a good lot of Mrs. John Laing. For twelve trusses of any Rose not a Tea, Messrs. F. Cant and G. Paul were first and second with Her Majesty. Mr. B. R. Cant had the best twelve trusses of any Tea or Noisette, showing Mme. Cusin in rich colour. Mr. F. Cant was second with a lovely lot of Mme. de Watte-

ville. Messrs. Prior and Sons were first and Messrs. Townsend second for twelve blooms of Maréchal Niel, and Messrs. Dickson first for twelve flowers of any new Rose with Mrs. Sharman Crawford. The same growers were first for twelve distinct new Roses, single trusses, showing Helen Keller, Marchioness of Londonderry, Captain Hayward, Mrs. Sharman Crawford, Mavourneen, La Fraicheur, Marchioness of Downshire, Shamrock, Muriel Grahame, Lady Moyra Beauclerc, and Avoca. Mr. B. R. Cant was second.

None of the new Roses shown were considered of sufficient merit to receive a gold medal, but a cultural commendation was granted to two varieties shown by Messrs. Dickson, of Newtownards, one of which—a Tea named Muriel Grahame—impressed us favourably. The plant shown resembled Mme. Hoste in habit of growth, whilst the flowers were full, high in the centre, pretty in shape, and of a cream colour. The other variety was a H.P. named Countess of Caledon, apparently a strong grower, the flowers deep rose-pink. Mr. W. Taylor, of Hampton, also showed flowers of a sweet-scented crimson H.P. Messrs. Cooling showed a globular H.P. named Bladud, white, with blush centre, but probably a doubtful one to open.

Garden Roses.

These made a charming feature, but the beauty of the display as a whole was lost through the scattering of the classes devoted to them. If they were placed as classed, visitors would see and enjoy them better, and they would make a bold break in the usual monotony of sloping boxes. There might with advantage be more classes for these even if those for the conventional kinds had to be reduced. For thirty-six bunches in distinct varieties, not less than three trusses to a bunch, Messrs. G. Cooling and Sons, of Bath, were first. Some of the best were l'Ideal in rich colour; Marquise de Salisbury, brilliant crimson; Mme. Chedane Guinoisseau, a lovely cluster flowered Tea; W. A. Richardson, Gustave Regis, Mme. Falcot, and Bardou Job. Messrs. Paul and Son were second. The best eighteen bunches were from Messrs. Townsend and Sons, Mme. Charles, Celine Forestier, and Mme. Chedane Guinoisseau being noteworthy. Messrs. Croll and Sons were second. Among amateurs Mr. Machin had the best eighteen varieties, showing Polyantha, Noisettes, and Cluster kinds, this exhibit receiving the silver cup given by Lord Penzance. In the smaller class Mr. O. G. Orpen was first, and Mr. Tate, Downside, Leatherhead, second. For twelve bunches of varieties suitable for button-holes, Mr. Mattock was first with a pretty lot, and Messrs. Townsend second; whilst prizes in the same order as named went to these two exhibitors for the best display of garden Roses arranged in a given space.

Miscellaneous.

The chief group was that from Messrs. W. Paul and Son, Waltham Cross, who showed the best garden Roses of all sections in quantity, and arranged so that one could form a true idea of their merits and decorative value. Shallow baskets were filled with clusters of such kinds as Marie van Houtte, Mme. Hoste, Edith Gifford, Camoens, Mme. Lambard, L'Ideal and Marquise de Salisbury, and these had a telling effect. Some of their new varieties, such as Sylphe, Clio, Corinna, and Duke of York, were also well shown. These, with many older and well-known kinds, made a striking display tastefully arranged and remarkably fresh even at the end of the hot day. Mr. W. Rumsey, of Waltham Cross, showed Roses in variety, and Messrs. Jackman and Sons had a good exhibit of Hybrid Perpetuals and garden varieties, but there was nothing new in these groups, so we need not enlarge upon them. Mr. C. Turner, of Slough, showed Crimson Rambler Rose in quantity. Messrs. J. Laing and Sons also showed Roses, but the feature of the show apart from the Roses, and one which attracted much notice, was their grand group of Begonias, arranged in a charming way with a light foil of Asparagus plumes and Fern to relieve the flowers. Some of their finest and newest varieties were prominent in the group. They also had a large group of Caladiums. Mr. Anthony Waterer showed his new Spiræa profuse in bloom and rich in colour. The group of Calochorti and Lilies from Messrs. R. Wallace and Co., Colchester, found many admirers. Messrs. J. Cheal and Son, Crawley, had a group of hardy flowers, and Mr. W. E. Tidy, Brockhampton Nurseries, Havant, showed a very large group of Sweet Peas, which comprised all the best varieties in rich and delicate colours, the flowers remarkably fresh and sweet.

A full prize list will be found in our advertisement columns.

ROYAL HORTICULTURAL SOCIETY.

July 9.

Another good exhibition of varied produce was to be seen on Tuesday last; not so extensive, it is true, as the recent displays, but sufficiently so to make up a thoroughly representative exhibition. Roses were one of the features, and these were very fresh and bright in colour. Orchids were not so numerous, but several novelties and rarities, as well as good standard kinds, were to be seen. Outdoor fruits were thoroughly good, notably Cherries and bush fruits. Of indoor fruits the most numerous were Melons, but the rich luscious flavour so desirable in this fruit was confined to quite a few kinds. Vegetables were shown in very fine condition, being all the more noteworthy by reason of the prolonged drought.

Orchid Committee.

No first-class certificates were awarded at this meeting, but awards of merit were made to the following, viz.:—

Lælio-Cattleya D. S. Brown (Cattleya Trianæ × Lælia elegans), in which the growth and general contour of the plant were quite intermediate between those of the two parents, the flowers being of large size, the sepals and petals of a deep rose colour flushed with purple, the lip of a velvety dark purple shade with golden veins in the throat; an excellent hybrid. From Messrs. Sander and Co.'s collection.

Odontoglossum vexillarium Constance Wigan.—A lovely form of this species, the flowers of unusual size, having the lip of extra breadth, fully 4 inches, the colour being pure white, the sepals and petals retaining a slight rosy flush. From Sir F. Wigan's collection.

Vanda tricolor var. planilabris. — The flowers of this were particularly handsome both in form and marking, the sepals and petals being wider, thus giving a more massive appearance, the colour being a citron-yellow with rich brown spots, the lip rose-coloured with dark chocolate lines. From Mr. R. J. Measures' collection.

Brassia verrucosa, which, although quite an old Orchid, does not appear to have been certificated before. The plant in question bore fifteen good spikes of its pale greenish yellow flowers, making a good display, the individual blossoms being large and very fresh. From the collection of Mr. De B. Crawshay at Rosefield, Sevenoaks.

Botanical certificates on this occasion were dispensed with a liberal hand, no less than thirteen awards being made as follows: Dendrobium bracteosum, a very singular species, flowering upon the old bulbs, not in any sense showy; Lycaste Dyeriana, with pale greenish yellow flowers (from Peru); Dendrobium speciosissimum, which bears some resemblance to the old D. infundibulum, with less colour, but of similar character, being more erect in growth. These all came from Messrs. Sander and Co. Eria Clarki, a dull yellow species, with dense spikes of bloom from Messrs. Lewis and Co. Masdevallia coriacea, another of the singular and very interesting species, from Mr. R. J. Measures. Polycinis muscifera, a very elegant species, with small golden yellow spikes having bronzy spots; Promenæa stapelioides, of very dwarf growth, the sepals and petals marked as in a Stapelia, the lip being intensely dark, almost black; Oncidium cucullatum Lawrenceanum, a small species, with dark purplish brown sepals and petals and a pale rosy purple lip; all from Lord Rothschild's collection at Tring Park. Oncidium cucullatum Lawrenceanum; Luddemannia Pescatorei, with small deep golden yellow flowers borne on pendulous and dense spikes; Masdevallia guttulata, bearing two quite small flowers to the one spike, these being light in colour, the growth also small and grass-like; Trichocentrum hymenantha, another miniature plant with small whitish flowers, these all coming from Sir Trevor Lawrence's collection. Sarcanthus teretifolius, with long Rush-like leaves, like V. teres, but longer, and long spikes of small dark-coloured flowers, from Mr. A. W. Witt, Maida Vale, W.

Messrs. Sander and Co. had the most important group in the hall, comprising many excellent things, amongst which were Cattleya Gaskelliana var. Madouxiana, in which the lip partook of C. gigas, with deep golden yellow in the throat, margined with purplish crimson; Lælia amanda, with soft, pale rosy lilac-tinted sepals and petals, the lip of a deeper shade, a beautiful variety; Anguloa uniflora, with waxy white flowers, quite distinct and as large as A. Clowesi, which was also shown beside it; Odontoglossum luteo-purpureum, a good example; Cattleya Wallisi, with pale creamy white sepals and petals, the lip being dark maroon, with an orange-coloured blotch; Lælio Cattleya Arnoldiana, one of the most beautiful of the hybrids, with deep rose-coloured sepals and petals, the lip dark rosy purple and well expanded; Lælia elegans Schrœderiana, with the sepals and petals of a soft flush of palest rose, the lip being of an intensely deep crimson-purple, very distinct in this latter respect, and an extra fine variety. Dendrobium speciosissimum, after D. Jamesianum; Catasetum Christyanum, with dark, almost black sepals and petals, an extra fine variety and in the best of condition; Cattleya Rex, with rich ivory white sepals and petals, the lip being shaded with a deep gold tint and rosy lilac and crimson markings, a fine species and very distinct; Cattleya Gaskelliana virginalis, a very distinct pale form with slight traces here and there in the lip of pale purple; Dendrobium Phalænopsis Schrœderianum, good examples with fine spikes from the old bulbs; Cattleya Brymeriana, a supposed natural hybrid (C. Eldorado × C. superba), showing C superba quite distinctly, but quite distinct therefrom, the lip having purplish crimson markings with golden yellow in the throat, were also sent. Odontoglossum Harryanum, very fine and rich in colour; Odontoglossum vexillarium, in very fine forms, one called Empress Augusta Victoria being of a deep rose colour and of large size, another named Chelseiense, a much paler form, but with deep crimson lines and ground at the base of the lip; another called conspicuum being also distinct; Cypripedium nobilius, an excellent hybrid; Cattleya Miss Measures (C. speciosissima × C. velutina), a pleasing hybrid showing the former parent in the lip, the sepals and petals being shaded in a peculiar way with rose and bronze, were also included. Award silver Banksian medal.

Mr. George Marshall, Grimsby, had a smaller, but excellent group, consisting chiefly of Cattleyas, in which good forms of C. gigas were conspicuous, C. Mendeli being also included as well as C. Gaskelliana. The most noteworthy plant, however, was a grand example of Epidendrum vitellinum majus with several very stout spikes and large blooms. Award silver Banksian medal.

Messrs. H. Low and Co. had an attractive and showy group, amongst which were two distinct forms of Oncidium Lanceanum, this charming species being still all too scarce. Odontoglossum Roezli and O. Roezli album were again included here. Oncidium macranthum was specially good, being rich in colouring. Odontoglossum crispum; Cattleya superba, a good piece; Oncidium Marshallianum, with several stout spikes freely branched; Grammatophyllum Measuresianum, with one long spike; Lælia grandis tenebrosa and

Cattleya granulosa, both good, the latter specially so; Cypripedium Curtisi, C. Alice (hyb.) showing C. Spicerianum, also C. Veitchi, and a good plant of Aerides Lobbi were also sent (award bronze Banksian). Messrs. J. Veitch and Sons showed another of their hybrid Dendrobes in D. porphyrogastrum (D. Dalhousianum × D. Huttoni), with large flowers of the palest tint of porphyry, a most delicate shade, and a beautiful hyb. Cypripedium Dominianum albicans, a pale form of this older hyb., very distinct and pleasing, with long tail-like petals. Mr. R. J. Measures had several cut Orchids, amongst which was Lælio-Cattleya Schilleriana, flowers large, the sepals and petals being flushed with the softest tints, the lip quite in contrast, being of a dark velvety purple. Vanda Parishi, with its rich aromatic perfume pervading the atmosphere, was also to be seen here in good character. Pleurothallis longissima, with long slender spikes of the palest of green flowers, a fitting companion to Dendrochilum filiforme; Odontoglossum Harryanum, well developed spikes; Cattleya Gaskelliana and C. Gaskelliana albescens, the latter very distinct and beautiful; C. Wallisi, a fine form of this beautiful Cattleya; also C. Mendeli, in which the colour of the sepals had run into the lip in a singular fashion, were also sent. From Messrs. Lewis and Co. came Lælia grandis tenebrosa, Cattleya Gaskelliana and C. Harrisoni, all in good condition; also Polystachys luteola and Bifrenaria vitellina, with deep golden yellow flowers; Cynorchis grandiflora, a singular Orchid with greenish sepals and petals and a rosy lilac lip; Oncidium Schlimi, a good spike; Cypripedium niveum superbum, a larger form; C. leucorrhodum, Dendrobium thyrsiflorum, Lælia grandis tenebrosa var. Bella, with pale-coloured flowers; also Cattleya citrina and Vanda Lewisi, a miniature species.

From Sir Trevor Lawrence came Vanda Rœblingiana, with brownish spots on a green ground, the lip fringed, and of singular formation; Masdevallia Rolfeana, of dwarf growth and with dark coloured flowers; M. Peristeria, pale greenish yellow with darker spots; Polystachys Lawrenceana, tawny yellow sepals and petals, and pale blush lip; Masdevallia Stella (hyb.), soft rosy pink, a lovely shade of colour; Odontoglossum vexillarium superbum, with small flowers, deep rose colour with dark crimson blotch on lip, edged with white; Dendrobium revolutum, with pure white sepals and petals, the lip being unusually large, and of a pale greenish yellow; Pleurothallis macroblepharis, extremely beautiful and interesting, the small dark flowers being borne on hair-like stems; and Nanodes Medusæ, an Orchid that is rarely shown, being both singular and interesting.

From Mr. Malcolm Cook, Kingston Hill, came a fine cut spike of Cattleya gigas with four flowers, and Mr. F. A. Brown, Lawn Bank, Teddington, sent Schomburgkia tibicinis, brighter in colour than usual, evidently a good form. Mr. J. Gurney Fowler sent Lælia grandis tenebrosa, a pale variety with light bronzy sepals and petals, the lip still retaining the deep purple colour.

Mr. J. Foster Alcock, Northchurch, Herts, exhibited a specially fine Odontoglossum Harryanum rich in colour; this splendid Odontoglot has rarely been seen in a finer variety. From the same source came Odontoglossum crispum, well flowered and good spikes; also Lælia grandis tenebrosa, a small plant of a distinct form.

Floral Committee.

First-class certificates were granted to the following:—

HEMEROCALLIS AURANTIACA.—A new variety of robust character and striking beauty, with large flowers of a rich apricot colour. A note describing it more fully, appears on another page. It was shown by Messrs. R. Wallace and Co., of Colchester.

ARNEBIA CORNUTA.—This handsome Borage-wort is an annual of brilliant and showy colour, the flowers rich yellow, with five large spots of velvet-brown on the corolla. The flowers are borne profusely in a long succession. From Messrs' Dobbie and Co., Rothesay.

Awards of merit were given to the following:—

BEGONIA CARMINATA.—This is a hybrid, the result of crossing B. Dregei with B. coccinea, and handsomer than either of its parents. It has the long, deep green leaves of B. coccinea, but instead of being smooth-edged they are lobed, as in B. Dregei. The flowers are rosy-carmine, numerous, in drooping, branched racemes, and the plants free-flowering even in a young state. Shown by Messrs. J. Veitch and Sons.

BEGONIA MR. F. BOSTOCK.—A double-flowered variety, free and robust, the flowers double, but graceful in outline and of a bright scarlet colour. From Messrs. J. Laing and Sons.

CALOCHORTUS LUTEUS CONCOLOR.—This is a new and sturdy variety having stout stems, which grow about 1 foot high. The flowers are large, of a rich buttercup-yellow colour, with a few faint brown markings at their base. Shown by Messrs. R. Wallace and Co., Colchester.

CALOCHORTUS MACROCARPUS.—Though not new, this is not a common species. It has the largest flowers of any, and those shown were very fine, of a lilac-purple colour, lighter at the base, which is clothed with long silky yellow hairs. This also came from Messrs. Wallace and Co.

CARNATION MRS. W. BRIGHT.—A fine flowered variety of a rich yellow colour. A stand of cut blooms and a strong plant in a pot were shown. Most of these yellow selfs disappoint when tried in the open ground. Shown by Miss McRonald, Northgate Nurseries, Chichester.

GODETIA MARCHIONESS OF SALISBURY.—This has a bright effect in the mass as shown, as there is much less purple in the colour than in that of most Godetias. The flowers are rosy crimson margined with white, flushed with pink, the habit vigorous and free. From Messrs. Daniels and Sons, Norwich.

ROSE HAILEYBURY.—This is a Hybrid Perpetual variety, the flowers as shown only of medium size, but full and good in form and colour, which is light crimson. They are also sweetly scented. Shown by Messrs. G. Paul and Son, Cheshunt.

STREPTOCARPUS LAING'S MULTIFLORA.—A pretty form with a rather stupid name. It is an abundant flowering kind, the blooms large, rich blue, feathered with deep violet-purple in the throat. From Messrs. J. Laing and Sons, Forest Hill.

There was a considerable falling off in the number of miscellaneous groups, but that from Messrs. R. Wallace and Co., of Colchester, was a centre of attraction throughout the day and deservedly merited the silver Flora medal awarded. The new Day Lily in the centre of the group was conspicuous. Lilies, too, were plentiful, including L. auratum, L. longiflorum præcox, an early form, and L. canadense, in red and yellow varieties. The lovely L. Krameri was shown, also L. Parryi, which has rich yellow, sweet-scented flowers and is a most beautiful kind to grow in moist, peaty places. Two charming small Lilies were L. Coridion, with yellow flowers, spotted with brown, and L. concolor, a dwarf species, which holds its flowers erect. They are of a brilliant scarlet colour with dark spots. Among L. elegans varieties the extremes of colour were seen in the varieties Horsmani, with its dark, blackish crimson flowers, and Alice Wilson, which is rich lemon-yellow, with a darker band of colour down the centre. Calochorti were again largely shown. Brodiæas in variety were also shown, and some good forms of the Japanese Iris. Messrs. Barr received a silver Banksian medal for a good group of the best hardy flowers in season, the chief features being Sea Hollies in variety, Lathyrus latifolius in several forms, Anthemis tinctoria Canary Bird, a rich yellow variety of this fine hardy Daisy, Lilium Browni, L. longiflorum, and L. testaceum. Platycodons were good, also Japanese Irises, Achillea filipendula, Pink Ernest Ladhams, Statices, and Sweet Peas.

Mr. H. Eckford showed a great many varieties of Sweet Peas, a bunch of each kind in a separate vase. There is certainly no finer annual flower, as it embraces such a wide range of colour. Among those shown we noted Mrs. Sankey and Blanche Burpee, white; Peach Blossom, a lovely shade of pink; Novelty, rich rose; Duke of Clarence, deep maroon; Stanley, of a similar hue; Countess of Aberdeen, blush-pink; Captain of the Blues; Queen Victoria, cream, and Lady Hamilton, of a lovely lavender shade. A silver Banksian medal was awarded, and a similar award was made to Mr. Charles Turner, Slough, for Carnations, cut flowers staged with the conventional collar round their necks, and every flower dressed so that no individuality of form was apparent in any of them. Messrs. Sander, of St. Albans, showed a pink perpetual-flowering Carnation, and Mr. J. Douglas, of Great Bookham, exhibited several very fine varieties, as Corinna, yellow; Hayes Scarlet, a brilliant colour; Grace Darling, spotted purple; and Lady Ridley, white self. Mr. H. Becker, Jersey, showed a pink self Carnation somewhat resembling Countess of Paris, but distinct, and called Jersey Maid, and Messrs. Cutbush showed a rose and salmon variety named La Vilette. Mr. Anthony Waterer again showed his Spiræa in good condition, and another new form of the same free flowering character named S. Margaritæ, with rosy pink flowers. It is quite distinct, and will make a charming companion to the crimson variety. Messrs. Sander and Co. showed Dipladenia atropurpurea in small plants freely flowered, also D. boliviensis, which is white, with a yellow throat. Half-a-dozen vars. of Sonerila varied and pretty in their leaf markings, Eriocnema Sanderæ in good leaf colour, and a fine pan of Dionæa muscipula came from the same firm. Messrs. J. Veitch and Sons showed six very fine spikes of the rich yellow Eremurus Bungei, which were much admired. Messrs. Sutton and Sons, Reading, sent a good lot of Nemesia strumosa in wide range of colour, from pale yellow to rich crimson with numerous intermediate and indescribable shades. Pancratium collinum was shown by Messrs. Lewis, of Southgate, and an ugly double purple and white Petunia came from Mr. Beldam, The Lodge, Acton. A very fine seedling form of Chrysanthemum maximum was shown by Mr. Middlehurst, of Liverpool, and Messrs. Laing and Sons showed several good new Begonias. Mr. J. Forbes, of Hawick, sent a fine lot of Delphiniums which, however, did not bear their long journey very well, and a Godetia named E. F. Fairbairn was shown by Messrs. Fairbairn, of Carlisle. Messrs. Daniels, Norwich, showed a quantity of an Ivy-leaved Pelargonium named Queen of Roses, the trusses compact, the flowers large, very double and of a deep rose colour. A vote of thanks was given to Mr. G. F. Wilson for a fine flower of Cereus Alice Wilson, a lovely variety raised in America by Mr. C. M. Hovey. Mr. G. Paul showed several new Roses, one named Bacchus looking very promising as a garden variety. It is a Hybrid Perpetual, bearing rich velvety crimson flowers of medium size on long stems.

Roses.

Special prizes were offered for Roses and some very fair flowers were shown, but the competition was not so strong as in an average season. Mr. Frank Cant was quite to the fore in the open classes, securing first prize for twenty-four distinct single trusses of Hybrid Perpetuals, and the same in another class for that number of Teas. For twelve of one variety of Tea Rose he was also first, Mr. B. R. Cant being second in all three classes.

For twelve distinct varieties of H.P.'s, three blooms of each, Mr. B. R. Cant was first, and Mr. G. Mount, Canterbury, second, and the same order obtained in the class for twelve single trusses of any variety of H.P., Mr. B. R. Cant showing a grand dozen of Gustave Piganeau, while Mr. Mount staged A. K. Williams. In the amateur classes for twenty-four distinct H.P.'s, single trusses, Mr. E. B. Lindsell, Hitchin, was an easy first with a grand stand of fine flowers, Mr. T. B. Haywood being second. For twelve

distinct single trusses, Mr. J. Gurney Fowler, South Woodford, was first, and Mr. O. G. Orpen, West Bergholt, second. In the corresponding open class Mr. B. R. Cant was first, and Mr. Mount second. For six single trusses, amateurs, Mr. Langton, Hendon, was first, and Mr. K. H. Gifford, Streatham, second, whilst for six blooms of one variety, Mr. Haywood and the Rev. J. H. Pemberton were first and second respectively with A. K. Williams. Mr. Orpen had the best twenty-four Teas among amateurs, showing some fine flowers, and Mr. H. V. Machin was second. Mr. Langton showed the best six Teas, single trusses, Mr. C. J. Grahame, Croydon, being second, and for six of one variety Mr. Langton was first with Innocente Pirola, and Mr. Orpen second with Souvenir d'un Ami. We have not enumerated the best blooms in the larger stands, as they practically correspond with the selections made and to be found in our report of the Palace show.

Fruit Committee.

The exhibits at this meeting were numerous, very fine fruit and vegetables being staged, the Cherries from Gunnersbury House and the fruit in quantity from Messrs. Veitch, Chelsea, being most admired. Melons were again sent in great numbers, but only two found worthy of an award.

Awards of merit were given to—

Melon Epicure, a round fruit, above medium size, flesh deep green, finely flavoured, with bright skin, the latter much netted. From Mr. Mortimer, Swiss Nursery, Farnham, Surrey.

Melon Nugget, flesh bright scarlet, the fruit round, well netted and richly flavoured. This is so far the best Melon of the year. Also from Mr. Mortimer.

Messrs. Veitch, Royal Exotic Nurseries, staged a very fine collection of Cherries, Gooseberries, Currants and Raspberries. The Cherries had been grown on pyramids at their Langley nursery, and comprised the best varieties, no less than thirty distinct kinds being staged. Bigarreau Napoleon and De Schreken were very fine. Among the black kinds the Tartarian was specially good, also Elton, Royal Duke, Empress Eugénie and Governor Wood. Mammoth, a large yellow mottled fruit, was very good; also Reine Hortense (one of the Duke section), Archduke, Royal Duke and May Duke. Very fine fruits of Raspberry Superlative and Yellow Antwerp were staged, both growing branches and gathered fruits. The Gooseberries were also staged in a growing state from cordons, and comprised the leading varieties, the best being Forester, Early Red Hairy, Bright Venus, Early Sulphur, Golden Drop, Hedgebury, Green Gascoigne and Overall. Among the Currants the White Grape was very good (silver-gilt Knightian medal). Mr. J. Hudson, Gunnersbury House, Acton, staged three large boxes of Cherries, the varieties being Bigarreau Napoleon and Black Tartarian. The fruits were equal to the best fruits grown under glass. Growing branches were also staged to show cropping qualities, the shoots being heavily laden with fruit (silver Banksian medal).

Mr. E. Beckett, Aldenham House Gardens, Herts, staged twenty-four dishes of vegetables in some eighteen varieties, every dish being specially good, well meriting the award given. Tomatoes Perfection, Chemin, and Polegate were very good, as also Walcheren Cauliflower, Snowball Turnip, Prodigy and Duke of Albany Peas, Canadian Wonder Beans, and three varieties of Potatoes (silver-gilt Knightian medal). Mr. W. Empson, Ampthill House, Beds, staged a large collection of vegetables with nine dishes of fruit, but we do not think it adds to the value or appearance of the vegetables to stage fruit with them. Foster's Seedling and Black Hamburgh Grapes were good, as also Brown Turkey Figs, Waterloo Strawberries, and Superlative Raspberry. Early York Cabbage, Stratagem Peas, Snowball Turnip, and other vegetables were also well shown (silver Banksian medal). Messrs. Veitch, Chelsea, staged no less than thirty-six varieties of Peas. This was an instructive exhibit, and though the season has been most unfavourable for this crop very good examples were staged. The most noticeable dishes were Stratagem, Invincible, Pride of the Market, Maincrop, Daisy, Masterpiece, Alderman, and Veitch's Perfection (silver Banksian medal).

Mr. Eckford, Wem, Salop, sent seven new seedling Peas of great merit, but as the cropping qualities could not be tested they were referred to Chiswick for trial. Mr. Ward, Longford Castle Gardens, Salisbury, sent a new Pea of nice appearance. This, too, was requested to be sent for trial. A new field Pea named Parish Councillor, large and good, was sent by Mr. A. Gray, Hertingfordbury Park, Herts. Messrs. P. Barr and Son, Covent Garden, had a collection of Peas and Lettuces, also nice examples of St. John's Day Cabbage. Mr. Gilbert sent a new Cauliflower named Burghley Pet, of compact habit and with pure white curd. A new seedling Cucumber came from Mr. Knellor, Malshanger Park, Basingstoke, a nice looking fruit. Mr. S. Groves sent nice looking fruits of Tomato Temple Favourite, with large smooth deep flesh of a dark colour.

From the Society's gardens came a very interesting collection of Red and White Currants, also fruiting branches of the same. The most notable were Fertile de Palluau or Red Cherry, Houghton Castle, one of the best Red Currants grown; the old Dutch Mallow-leaved or Raby Castle, a strong grower, fruit large, very acid; the cut-leaved De Verrier and Wilmot's Red, the same as the Red Dutch. The best white kinds were Large White, Cut-leaved, Macrocarpa and White Dutch. Mr. H. Becker, Jersey, received a cultural commendation for two varieties of Currants. Nice Pine-apples and Humboldt Nectarines came from Mr. Kemp, Stoke Park, Slough. Some very long fruiting branches of Raspberry Papworth Prolific came from Mr. Papworth, Caterham, but the fruits were small. A new Raspberry, much like a Blackberry, was sent by Mr. Farini, Dartmouth Lodge, Forest Hill. Seedling Strawberries, crosses between several new kinds, came from Mr. Carmichael, Pitt Street, Edinburgh. Those sent were not in condition to test quality. Peaches Royal George and Noblesse were sent from the Horticultural College, Swanley, also Melons Golden Queen, The Empress and Her Majesty. Mr. Smythe, Basing Park, Mr. Ashton, Glossop Hall, Derby, Mr. Richardson, Cheadle, Mr. Pettigrew, Cardiff Castle, Mr. Wythes, Syon House, Mr. Bishop, Wightwick Manor, and others sent seedling Melons, but none were deemed worthy of an award.

The lecture was by Mr. Francis Darwin, and dealt with "The effect of darkness upon the growth of plants." He was favoured with a good audience and much interest was manifested.

Gardeners' Royal Benevolent Institution.—We learn that the Worshipful Company of Skinners have given a donation of £10 10s. in aid of the funds of the Gardeners' Royal Benevolent Institution.

The weather in West Herts.—For the fourth time this year the highest temperature in shade has touched 80°, or exceeded it. The warmest days during the past week were the 7th and 8th, when the maximum readings were respectively 78° and 80°. The days lately have been hot, but the nights, on the other hand, cold for the time of year, which is usually the case in the type of weather recently prevailing. At 1 foot deep the temperature of the ground is at the present time 6° above the July average, and 5° warmer than at the same date last year. No rain, beyond that deposited by a passing shower, has fallen during the past nine days. The present drought may be said to have set in here on April 28, since which time (ten and a half weeks) the total measurement only amounts to little more than 1 inch, while no rain water at all has come through either percolation gauge for over six weeks. On the 8th inst. the air was again very dry indeed, the difference between the readings of a dry bulb thermometer and one with its bulb kept constantly wet amounting to 20° at 3 o'clock in the afternoon.—E. M., *Berkhamsted.*

Public Gardens.

Open spaces.—At the monthly meeting of the Metropolitan Public Gardens Association, 83, Lancaster Gate, W., the Earl of Meath, chairman, presiding, it was reported that St. Stephen's ground, North Bow, and some small grounds in Canning Town were being laid out; that the Friends' burial ground in Long Lane, S.E., would shortly be commenced; that the purchase of 10 acres in Hermit Road, E., for a recreation ground, towards which the association had subscribed, was almost completed; and that additional seats had been accepted for Hackney Churchyard. It was agreed to give the support of the association for the acquisition of Churchyard Bottom Wood, Highgate, and of a recreation ground for Barking Side, Ilford, E. Plans were considered for the laying out of St. James's Churchyard, Pentonville Road, and Christ Church Churchyard, Blackfriars Road, S.E., and progress was reported with regard to the efforts the association was making to acquire sites for recreation grounds at Putney, Walworth, and Deptford, in each case involving the collection of considerable sums of money, towards which contributions were asked.

Obituary.

Death of Mr. John Wills.—Just as we are going to press we regret to hear of the death, at the age of 64, of Mr. John Wills, of Onslow Crescent, South Kensington. He had been in ailing health for a long time.

Insects on Roses.—Will you kindly tell me if this is a destructive fly among Roses, as my employer thinks it is the same that is so destructive to Roses in the south of Italy?—P. Elder.

*** The insect you sent is one of the sawflies which attack the Rose, or rather it is their grubs which do so. The flies themselves are very harmless, but they lay their eggs on the leaves, and the grubs which are hatched from them are very destructive to the foliage. Picking them off by hand is the best way of getting rid of them. They are not very easily detected among the foliage, but as soon as you have found one or two, you will not have much difficulty in seeing the others.—S.

BOOKS RECEIVED.

"Manual of Forestry." Vol. iii. Forest Management. W. Schlich. Bradbury, Agnew and Co., Ltd., Bouverie Street, London, E.C.

"In a Gloucestershire Garden." By Canon Ellacombe. Edwin Arnold, Bedford Street, W.C.

"Agriculture, Practical and Scientific." By J. Muir. London: Macmillan and Co.

"Les Plantes Alpines et de Rocailles," avec figures dans le texte. Par H. Correvon. Octave Doin, Paris.

Beeton's "Shilling Gardening." New and revised edition. Ward, Lock and Bowden.

"Fast Day and Vegetarian Cookery." By E. M. Cowan and S. Beaty-Pownall. Horace Cox, London.

"Bulletin of Miscellaneous Information." Royal Gardens, Kew.

Names of plants.—*W. H. C.*—1, Platycodon grandiflorum; 2, Bocconia japonica; 3, Campanula latifolia; 4, Œnothera missouriensis; 5, Lysimachia clethroides; 6, Achillea Eupatorium.——*E. E. Stevenson.*—Astragalus galegiformis.——*G. B. B.*—1, Hemerocallis fulva; 2, Spartium junceum; 3 and 4, next week.——*G. A.*—1, Rose Georges Bruant; 2, Pentstemon Murrayanus.——*Constant Reader.*—Calycanthus floridus.——*W. M.*—Spiræa callosa.

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"This is an Art
Which does mend Nature: change it rather; but
THE ART ITSELF IS NATURE."—*Shakespeare.*

ORCHIDS.

ORCHIDS FOR GROUPING.

ALTHOUGH there are no plants so admirably adapted for grouping so as to get light and beautiful effects as Orchids, possibly there are none so frequently spoilt by flat uninteresting arrangement—a bank of flowering Orchids interspersed with Ferns and other fine-foliaged plants, kept high at the back, sloping regularly down to the front, and edged with creeping plants. How frequently this is repeated at our large exhibitions. There is a gorgeous wealth of blossom and enough material often to cover double the amount of space, but artistic or pleasing effects are wanting. With regard to trade groups there is the excuse to be urged that the space allotted is limited, and nurserymen wish to show as much as possible in order to give the public a sight of as many as possible of their treasures and connoisseurs an opportunity of comparing varieties. But with private growers, either at exhibitions or at home, there is not this inducement to crowding, and yet it occurs none the less. Respecting the arrangement of Orchids at home, there are very many places where a suitable structure for the purpose does not exist. Flowering houses (as usually understood) are built much on the same principle as those for growing, the only difference being a smaller amount of piping and a little different arrangement of the stages. An ideal house for the purpose is one without any staging whatever, but plenty of floor space, whereon the floral arrangements can be varied at will. The walls would have to be clothed with greenery of some kind, some of the hardier Adiantums and other Ferns that will thrive and look green in a moderately dry atmosphere being most suitable. A few larger-growing and graceful-habited kinds, such as Woodwardia radicans or Microlepia hirta cristata, should be planted to prevent a flat or formal appearance. The temperature must, of course, be kept mild and genial, and pipes would, if left bare, be unsightly. These should either run underneath the floor level or, if kept inside the house, be covered in some way. Rockwork is the means that at once suggests itself, and this, if prettily conceived and carried out, is excellent, and quite in keeping with a natural and pleasing mode of arrangement. An informal surface will be the first consideration, and in the construction plenty of outlets for the heat must be provided, these being kept out of sight by judicious planting. Niches must also be left for placing Orchids in when in flower. A somewhat subdued light is always to be preferred, as Orchid flowers of all kinds are better viewed in such than in a very light house, the lovely blendings and combinations of colouring being greatly enhanced. I know of nothing more charming or natural looking than the scandent scapes of such as Oncidium macranthum about the stems and under the leaves of Tree Ferns or Palms, and if a few healthy specimens of the latter are obtainable, the task of the decorator is considerably lessened. But these must not be placed at the back with plants hiding the stems, or the graceful curves of the foliage cannot be seen.

Coming to the front of an imaginary group, in conspicuous places mounds of varying height and outline may be formed, the material, of course, differing according to the season and individual circumstances. Masdevallias of the brightly coloured species may peep out from amongst the fronds of Maiden-hair or dwarf Asparagus, these giving place higher up to the arching spikes of Odontoglossum crispum or O. Pescatorei very thinly disposed, the whole surmounted by a nicely furnished Cocos Weddelliana or similarly habited Palm. This would have a charming appearance, while further back upon a base of some trailing or low-growing plant the more erect varieties, such as Oncidium Marshallianum, crispum, and others, or Calanthe Veitchi or C. vestita might be arranged with telling effect. Brightly-coloured fine-foliaged plants, as Crotons or Coleuses, are, I think, totally out of place when grouped with Orchids, these garish effects being distinctly inferior to the restful and impressive combination formed by the simple greens of the Ferns in conjunction with the subdued tints of Orchids. The evergreen Dendrobes have a wonderfully fine appearance when tastefully arranged with Cattleyas and Lælias, or with the more simple flowering Miltonia vexillaria. Thus dozens of pretty combinations may be mentioned, but these will suggest themselves as the work proceeds, and must necessarily vary according to circumstances. The principal points to be aimed at are an undulating surface and a light graceful effect, nothing being crowded, and yet while not exactly balanced, yet seemingly wanting nothing to complete it. No other flowering plants should be introduced if it can possibly be avoided, Orchids having an appearance entirely their own and possessing certain qualities wherein no others can vie with them. If a display has to be kept up and Orchid flowers are scarce, the best plants to use are those with simple, though brightly-coloured flowers, such, for instance, as Poinsettias, during the winter months, or Anthuriums while these are in flower. These heighten the effect of the Orchids and do not suffer by contrast. Such plants as Lilium auratum and other richly marked species must be avoided. H. R.

Cattleya superba.—"R.," writing on Cattleya superba, says: "Personally I prefer pots or baskets for this species." I have in a previous number of THE GARDEN stated my experience with this fine Cattleya. I quite agree with "R." that small plants are not worth the trouble of growing. My first experience with it was about twenty-five years ago, when I was feeling my way in Orchid culture, and I knew nothing at all about the requirements of C. superba. I bought six fine large plants, and was recommended by the late Mr. Dominy to grow them in pots like other Cattleyas. This I did, and can truly say they had my best personal attention, but I could plainly see that they were not happy, and one after another died off until two only were left. I therefore cut two lengths of Tree Fern, each about a foot in length, and turned the two plants out of the peat and Sphagnum and placed them on the Fern stumps. They improved henceforth and flowered admirably every year. Mr. Pilcher flowered this species beautifully when gardener to the late Mr. Rucker at Wandsworth. It requires plenty of heat and moisture when growing and to be kept clear of thrips, which is its worst enemy. —J. DOUGLAS.

Vanda teres.—This is now beautifully in flower with me and grows like Willows, making growths a foot to 18 inches in length in about twelve months. It will stand as much heat, light and moisture when growing as any Orchid known to me and continues to do so. I grow the plants on a long upright raft of teak rods. The base of the raft is plunged in clean crocks and surfaced to the depth of 2 inches to 3 inches with chopped Sphagnum Moss in a fresh state. The base of the rod-like stems is inserted in the Moss and the plants soon attach themselves to the rods by their roots. It is quite an aërial rooting species, as in some instances the roots in the Moss are quite dead, whilst those twisted in and out amongst the teak rods are fresh and vigorous. Now is the season of growth, or at least as soon as the flowering period is over. Keep the plants in free rapid growth close up to the glass, shutting up the house early in the afternoon to raise the temperature to 90° or 100°. When the growth is completed gradually reduce the temperature and winter the plants in the Cattleya house, keeping them quite dry at the roots.—J. D.

PERISTERIAS.

NOT many species of this genus are really popular plants, but one—P. elata—deserves a place in every collection. They are all characterised by the large egg-shaped pseudo-bulbs and handsome leaves, which on healthy plants of the above species are frequently 2 feet 6 inches or upwards in length. Being extremely free growing and of a terrestrial habit they require a strong substantial compost, one in which loam predominates. Three parts of this to one of peat fibre or good leaf-mould will make a capital basis, and to this must be added a good sprinkling of crocks and chopped Sphagnum. In potting, the base of the leading pseudo-bulbs must not be buried, but just rest on the compost, which must be kept below the rim of the pot. Good drainage is essential, and this must be carefully protected by a layer of rough Moss until the roots have taken a good hold of the compost. After potting, which should take place just before growth commences in spring, the plants must be placed in a brisk heat and carefully watered till the roots are well on the move. A thin layer of Sphagnum over the surface does away with frequent watering and hastens the formation of roots somewhat. When in full growth Peristerias will require ample supplies of water, varying this with occasional doses of weak liquid manure as the pseudo-bulbs approach completion. This treatment will cause a vigorous and healthy growth, without which it is useless to expect them to flower freely. After the pseudo-bulbs are well finished the water supply must be gradually diminished until in winter only enough to keep the compost just moist will be required. The chief insect enemy to be combated is brown scale, but with ordinary care and a timely application of the usual remedies this is not much to be feared. A black spot or rot sometimes attacks the base of the pseudo-bulbs, but this is usually caused by too much water combined with too little heat during the resting season. The plants should not be taken from the Cattleya house all through the year unless when in flower.

P. CERINA is a remarkably handsome species bearing about midsummer short pendulous flower-scapes, the blossoms being clear yellow in the type, the var. guttata being dotted with purple. These are strongly scented and last long in good condition. The growth of this plant is stronger from pots than baskets, but in the latter the blossoms of course show to greater advantage. P. cerina was introduced from Mexico in 1835.

P. ELATA.—The well-known Dove Orchid is a free-growing, stately habited plant introduced from Panama in 1826. The flower-spikes spring from the base of the pseudo-bulbs and rise to a height of 3 feet or more, producing the blossoms most freely and continuously for five or six weeks. Each blossom bears a strong resemblance to a dove as it appears when about to alight with wings partly erect. The sepals and petals are simple in form, concave and pure white. It flowers from the beginning of July until September.

P. pendula is a distinct and handsome species from Demerara. The pendulous flower-scapes bear upwards of a dozen flowers, which are powerfully fragrant, yellow, suffused with rose and dotted with purple. This may also be grown in baskets, and though a shy flowering kind should be more grown. A variety of this plant, P. p. Rossiana, first flowered by an Italian Orchid grower, to whom it is dedicated, is a rare plant, differing in colour from the type which has been in cultivation since 1855.

SEASONABLE NOTES ON ORCHIDS.

The weather is still of a tropical character, and the amount of damping and watering required is extraordinary. Indeed, it seems that the present season is likely to rival 1893, at least in this neighbourhood (Suffolk). Cattleyas of all kinds are showing, by their healthy-looking growths, how much they enjoy the bright sunlight. What a splendid grower C. labiata autumnalis is. I had quite given up hopes of seeing flower-sheaths on some newly-imported plants that were badly infested by Cattleya grub in the spring. Now, however, they are showing at nearly every growth. One can hardly help contrasting this with C. gigas, of which several grand growths that have been made without any check whatever are quite flowerless, even in this season. It is high time to warn growers to be on the watch with this latter species, and by any means in their power to keep it dormant after the flowers are past or the growths completed. C. Lawrenceana positively revels in the brisk heat and is making a splendid growth. Some fine growths of C. guttata Leopoldi I saw recently had gone off in a peculiar manner. The sheath first started to damp about half-way up the forming bulb, and from this the decay spread to the underlying tissues, the bulbs being at last so weakened that they snapped off. Nothing was amiss with it either above or below, and the plants were otherwise thoroughly healthy. They had not been syringed overhead, nor was the atmosphere kept unduly moist. The good old Oncidium incurvum is making a brave show as usual, the growths also being nearly complete. The removal of the plants to a drier atmosphere conserves the blossom, and also consolidates the new bulbs. Stanhopeas require great care in order to keep down red spider, the plants delighting in copious supplies of water now both overhead and at the root. S. eburnea favours us with a few flowers occasionally, and one plant has been almost constantly in bloom for over two months, the flowers, though very fleeting, being freely produced. Many of the species do not usually flower much the first season after being disturbed at the root for re-basketing, but this kind seems exceptionally free. Thunia Marshalliana is flowering rather irregularly this season, those plants with five or six shoots to each pot coming one at a time, thus showing the advisability of keeping to a smaller number. The plants when in flower may easily be grouped, and thus a better display made than under the former treatment. These are usually placed in a sunny frame after flowering, where later on the Dendrobiums will keep them company. The favourite D. Phalænopsis seems equally at home either in pans suspended near the roof, in baskets or in pots on the stages, the chief requirement apparently being a very high, moist temperature, with not too much rooting space. The useful D. Dearei is also quite happy under similar conditions, and the pretty white flowers, with the faint tinge of green on the lip, are just now very attractive.

In the cool house Disa grandiflora is pushing up its flower-spikes and will soon be in full beauty. This plant requires an enormous amount of water when growing freely if the specimens are healthy. As long as this is the case insects do not usually trouble it, but once they begin to go back, either green fly or thrips or both pounce down on the plant and put an end to all hopes of flowering. Although the water supply must be lessened after flowering, at no time must this Orchid be really dry at the root, for though no top growth is apparent, an important work is going on below in the swelling up of the immature crowns and the production of offsets. These offsets, by the way, are often freely produced through the side of the perforated pots, and are a recommendation to this kind being used. The great heat has rendered it very difficult to keep Odontoglossums and Masdevallias in pits or frames cool enough, ventilation only making matters worse by causing a dry atmosphere. The nights are cool and refreshing, however, and the lights being left entirely off, the plants get the full benefit of what little dew there is. A shower of rain during the day is a great help, and they must be exposed to get the fullest advantage. Mats should be laid on the glass of the cool house in addition to the blinds and kept moist by syringing several times during the day. Where much syringing overhead is practised those plants that are finishing their growth must be kept apart or there is a danger of their starting again into growth to the detriment of the flower-spikes, these never being so strong when the new growths are pushing at the same time. Great care is necessary with Odontoglots in flower at this season, the dry atmosphere of the flowering house being positively killing to them, in addition to the strain on the plants that flowering entails. If once the pseudo-bulbs begin to shrivel it takes months to restore them to a plump condition, and the subsequent growths are always weaker in consequence. It is yet too soon to diminish the shading on any of the houses, any plants that require more sunlight being preferably shifted to where this is obtainable without endangering the others. Continue to keep the growth clean and allow no check of any kind. Should damp weather set in a little fire heat would again be necessary, as it is important that a little ventilation should be kept in even the warmest houses by night as well as day.

Epidendrum cochleatum.—I have called in at the Chelsea nurseries of Messrs. James Veitch and Sons at various seasons of the year and cannot recollect not finding this rather pretty species of Epidendrum in flower. It is said to be the first of the genus that flowered in this country and is mentioned in one of the editions of Miller's "Gardener's Dictionary." The yellowish green sepals and petals contrast curiously with the lip, internally streaked with maroon, the outer surface being coloured rich maroon. Except in colour, it does not differ from Epidendrum fragrans, figured in *Botanical Magazine* (tab. 152 and tab. 1669).—J. D.

Cypripedium concolor.—This species was sent from Moulmein by the Rev. C. Parish some thirty years ago, and flowered in the year 1865 with Mr. Rucker and Mr. Day. Sir Joseph D. Hooker writing about it says "It seems to grow and flower as freely, and to be managed with as little difficulty as the other Indian Cypripedia." Doubtless this was written after a year or two years' experience only, for it was soon found that this and allied species were much more difficult to cultivate than C. villosum. For instance, Mr. Parish was careful to state that he found C. concolor growing on limestone rocks. In 1870 C. niveum was imported, followed by C. Godefroyæ and C. bellatulum. They are mostly found on calcareous rocks. This, of course, gives one some idea of the treatment they ought to receive. They have been grown well in loam from the limestone formation, with plenty of small pieces of limestone mixed with it, the plants given plenty of heat and a moist atmosphere. The other day I saw it growing well in the Royal Exotic Nursery at Chelsea in nothing but nodules of tufa, which consists mostly of carbonate of lime. It was interesting to see the roots running healthily over the tufa, the plants developing healthy green leaves.—J. Douglas.

Flower Garden.

THE ROCK GARDEN.

XI.

June 22.—Rock gardens everywhere have donned their best and brightest summer garb. The prevailing flowers of the week are still the many varieties of Dianthus and Campanula, but as I have already mentioned these in my notes of last week, I will pass them by and enumerate others that have come into bloom during the last fortnight or so, and might be associated in such a way that their colours would blend harmoniously.

Bright Carpets of Flowers.

Under this heading I will devote a few lines to such dwarf rock plants as are now in bloom, and are either of a prostrate habit or are adapted for massing together in such a way as to form a carpet over soil and stones on which here and there medium-sized and taller plants might be shown off to better advantage. The various forms of Thyme now in full blossom are useful. A very effective combination is formed by intermingled groups of the white Thymus Serpyllum albus and the so-called red Thyme (Thymus Serpyllum coccineus) contrasted against bright yellow flowers such as, for instance, Genista humifusa or Coronilla iberica, whose prostrate shoots would cover the stones as quickly as the Thyme. The woolly Thymus lanuginosus has not an attractive flower, but since its peculiar fluffy appearance is its greatest charm, this is of little consequence. It suffered severely during last winter, and in many places got killed altogether with the frost. Aubrietias have mostly passed out of bloom, but the finest of them all—namely, the purplish crimson A. Leichtlini—is still at its brightest, and associates well with the yellow Cheiranthus alpinus and the white Gypsophila repens or the prostrate double form of Silene maritima. A very beautiful rock plant of decumbent habit is the white Antirrhinum glutinosum, which should be allowed to droop gracefully over the stones and be associated with plants like the crimson Epilobium obcordatum, the magenta Callirhoe involucrata, or the pink Geranium cinereum, all of which are now blooming profusely. Alyssum spinosum with white flowers is of not so spreading a habit as some of its congeners, and looks exceedingly well associated with blue Campanulas or the pink Acantholimon glumaceum. Anthemis Griesebachi, another white flower, much resembles A. Aizoon, but its leaves are a little broader; it associates well with Gentiana cruciata, now in full bloom, and also with the very dwarf yellow Œnothera pumila. Very neat plants are the pink Saponaria cæspitosa and the yellow S. lutea, while for a quick growing carpeting plant few can surpass Silene alpestris, with its bright green dense cushion of leaves and pure white flowers. The pretty alpine Toadflax with dark purple flowers and orange throat is flowering

profusely this year, and on a sunny bank goes well with the numerous Sedums and Sempervivums now in bloom. Its flowers, as well as its small glaucous leaves, form a most striking contrast to the dark brown rosettes of Sempervivum triste or the brown foliage and yellow flowers of Sedum rupestre. Of other Sedums and Sempervivums now in bloom I might mention Sedum kamtschaticum, with alternate green leaves and umbellate cymes of deep yellow flowers; Sedum spathulifolium, with glaucous rosettes and bright yellow flowers, and the well-known Sempervivum Gaudini, S. arvenense, and S. Laggeri.

Before closing my remarks on dwarf plants I must not omit the numerous varieties of Iceland and alpine Poppies in their glorious shades of scarlet, orange, yellow, pink and white which are just now at their best. These Poppies associate splendidly with Campanulas, and a group of rocks reserved exclusively for Campanulas and Poppies at Newton Abbot has been a most ornamental feature for several weeks past, and will probably continue to be attractive for several weeks more.

I have suggested only a few of such combinations of plants as would be effective by way of contrast, but it will be obvious that the scope for artistic grouping must be practically unlimited.

Medium sized Plants now in Bloom.

Without medium-sized, and even now and then tall, plants introduced in suitable positions, rock gardens would lose much of that peculiar wild charm which should be one of their most essential features. I will here mention such of the medium-sized plants as have been in bloom for the last fortnight or so: Heuchera sanguinea (red), Chrysobactron Hookeri (yellow), Anthericum Liliago (white), A. liliastrum (white), Oxytropis strobilacea (lilac), Œnothera marginata (white), Linum flavum (yellow), L. narbonense (blue), Armeria cephalotes alba, Aquilegia pyrenaica (blue), Scutellaria alpina (violet with white under lip), Erigeron philadelphicus (mauve), Erodium macradenium (pale mauve with purplish black veins and spots), Chrysanthemum Zawadskyi (pale pink, yellow centre), Scabiosa Webbiana (creamy white), Funkia japonica aurea, F. j. luteo-marginata, Polygonum Brunonis (pink), Veronica candida (blue), Prunella grandiflora (red), P. g. alba (white), Dianthus barbatus magnificus (carmine) and Cynoglossum apenninum, with brilliant blue flowers. Last, but not least, I would mention that splendid Hawkweed, Hieracium villosum, with its large yellow flowers and shaggy leaves.

Dwarf Rock Shrubs in Bloom.

Veronica Colensoi has escaped the severe winter and is now a mass of white blossoms. Helianthemums also are still in full bloom, most conspicuous being the scarlet H. venustum, the crimson Rosy Gem, and the bright yellow H. lunulatum. A very dwarf and compact shrub in full bloom at the time of writing is Spiræa bullata (crispifolia), and the bright crimson Alpine Roses, Rhododendron ferrugineum and R. hirsutum, though past their best, are nevertheless still attractive. Raphiolepis ovata has not suffered here from the frost, and its white blossoms are now as beautiful as ever. The tiny Fuchsia pumila and the elegant Hedysarum multijugum must also be mentioned as effective shrubs.

Tall Plants in Bloom.

Many of the taller kinds of hardy perennials form most effective backgrounds in the rock garden or as isolated specimens, and of these I will mention the most suitable, according to their colour.

White.—Anemone pennsylvanica, Lupinus polyphyllus albus, Campanula persicifolia alba grandiflora, Chrysanthemum maximum, C. semi-duplex, Epilobium angustifolium album, Anemone rivularis, Achillea The Pearl, Campanula macrantha alba, Bocconia cordata, Clematis erecta alba, and Œnothera speciosa.

Blue.—Delphiniums in great variety, Baptisia australis, Scabiosa caucasica connata, Platycodon grandiflorum, Echinops ruthenicus, Campanula Louis van Houtte and other Campanulas mentioned last week. Pentstemon ovatus, P. heterophyllus, Polemonium in variety.

Yellow.—Centaurea macrocephala, Centaurea ruthenica, Genista tinctoria, Solidago virgaurea, Achillea ægyptiaca, A. Eupatorium, Scabiosa ochroleuca, Buphthalmum salicifolium, Inula glandulosa, Inula Hookeri, Gaillardia, Helenium pumilum, Lupinus arboreus, Senecio doronicum.

Red.—Pyrethrums of sorts, Lychnis chalcedonica, Geum coccineum, several Potentillas, Achillea Millefolium rosea, Papaver orientale in varieties.

Purple.—Erigeron speciosus, Geranium pratense, Geranium balkanum and Geranium armenum. The latter is of very compact growth and has large flowers of the brightest purple.

F. W. Meyer.

Exeter.

(To be continued.)

FLOWER GARDEN NOTES.

Following up the notes lately made in connection with herbaceous and summer bedding plants as to those best suited for flourishing in such a prolonged drought as we have experienced in 1895, I may mention a few annuals that have come satisfactorily through the ordeal without any artificial watering. Cosmos bipinnatus in variety is a capital dry-weather annual. It is remarkable that the foliage should retain its healthy green, and that flowers of really good size and substance should be produced so freely from parched soil. Plants are nothing like so vigorous as in 1894, possibly no more than three-fourths the height, but the healthy appearance and free-flowering properties are well maintained. Exactly the same remarks apply to the varieties of Malope grandiflora, plants of which are at the present time flowering very freely. Individual flowers possess the merit of retaining their freshness out of water a considerable time; indeed, the bloom will show no signs of dropping even if the stalk is comparatively dry and withered. Both the above annuals are capital subjects for cutting, and it is, therefore, gratifying to chronicle their success in a season like the present. Gaillardias sown at the end of March, pricked out the end of April, and transferred to summer quarters as strong established plants, are also looking well and flowering freely. One has only to look at the profusion of Poppies in the corn fields to realise what capital dry-weather plants they are. Possibly no single flower has come more rapidly to the front for cutting than the various forms of Poppies, and a dinner-table well done with judiciously selected colours thinly arranged among spreading panicles of Gypsophila paniculata is hard to beat. I said in last week's notes that herbaceous plants on dry borders were feeling the effects of the prolonged drought, and am sorry to say in such positions the Spiræas have completely collapsed; good spikes of flower will be very scarce. Passing by some large clumps of Hemerocallis that have been naturalised in a fairly moist spot in the pleasure grounds, I had the curiosity to pick a single flower to compare it for size and substance with the blooms on herbaceous borders running through the kitchen garden, and found it quite one third larger in size, the individual petals altogether firmer and thicker. The observation thus made applies to all families liable to be affected by want of water, such as Lychnis, Phloxes, Pyrethrums, as well as the various forms of Lilies, besides the Day Lily above named.

Tufted Pansies.—Anxious to secure at any rate a small percentage of cuttings, I have this week gone carefully over the beds of tufted Pansies, removed everything in the way of seed-pods and dying blooms, pricked the surface very slightly with a small fork, and gave a thorough soaking of water. If this is not conducive to the production of cuttings that will be large enough to enable early insertion, it will at least encourage growth to warrant a more extensive splitting up in the later propagation by division. This latter style of propagation will have to be more generally adopted than is usually the case, at any rate on all light dry soils. Here for instance I strike all the stock for the coming year as a rule from cuttings, but a close inspection of many varieties at the present time fails to furnish anything like the amount required. It is useless inserting cuttings late in the season; there is not the time for the making of good plants, and they dwindle away on the approach of severe weather. Given well-rooted plants, the proportion of loss is, on the other hand, phenomenally small whether they remain through the winter in the cutting frame or are transferred to permanent quarters some time in October. Personally I should always advocate autumn planting alike for tufted Pansies and summer-struck Carnations, Pinks, &c. Writing of Carnations reminds me that the grass has come on wonderfully in the last fortnight, and preparations for layering must be pushed forward, as the chances are that the flowering season will be comparatively short. Our losses on the Carnation beds were much heavier than usual, about one in twelve failing, but those that remained have done remarkably well, being large plants and throwing a fine lot of flower. Countess of Paris, Mrs. Reynolds Hole, Goldfinder, Sir Beauchamp Seymour and Murillo are at their best; other sorts grown, as Ketton Rose, Raby, and a pink deeply serrated Clove, are yet to come out. The different forms of Clove suffered more than the others, possibly owing to the more succulent grass.

Polyantha Roses.—Some three years ago a border in the flower garden running under a north wall that had been cleared of a lot of old shrubs was planted with Polyantha Roses in variety, and in a season like the present we have no more beautiful or useful bed. It is not that they are so much more free; all the families have flowered well, but the position is answerable for a long retention of individual trusses and flowers, a rather unique experience for 1895.

E. Burrell.

Claremont.

Chrysanthemum lacustre.—I have now in full bloom at my seed grounds at Bedfont a broad line of this plant 20 feet or so in length. A more showy white-flowering hardy plant for border decoration at this season of the year, or for cutting from, I do not know. It was sent to me a few years ago by an old Lancashire botanist, Mr. James Percival, Smithy Bridge, Rochdale, as the true Chrysanthemum lacustre, it being his way of protesting against a statement which appeared in one of the gardening papers that C. lacustre is but a synonym of C. latifolium or maximum. Really it is more closely allied to C. leucanthemum, of which I regard it as a glorified form growing about the same height, and, like it, very free of bloom. In habit of growth it represents C. leucanthemum, but is more robust. I notice that on page 455, Mr. E. Burrell writes of C. maximum as an "autumn flowering perennial Marguerite." I have plants of it in several positions, and where they are most favourably placed they are only just commencing to throw up their flowering stems. C. lacustre is now in full bloom and appears likely to be at the end of it almost before C. latifolium is coming into flower. I notice that Mr. Burrell states C. maximum, which I take to be the same as C. latifolium, requires annual removal on a light dry soil. I have C. lacustre on both light and heavy ground, and it does admirably in each, growing into

larger plants and not in any way needing annual removal. On referring to Messrs. Barr and Son's recently issued list of herbaceous perennials, I find they make lacustre a synonym of C. latifolium and as flowering in September and October. In Nicholson's "Dictionary of Gardening," neither lacustre, latifolium nor maximum find a place as species; so it would seem as if a great deal of confusion exists among the different forms. Messrs. Barr and Son give leucanthemum, grandiflorum and several varieties of maximum, the time of blooming of the last being from June to August. —R. D.

ONOSMA TAURICA.

(GOLDEN DROP.)

This is one of those choice subjects which in the majority of gardens does not attain to a very great age. In the ordinary course, plants of a few years old die off quite suddenly and without apparent cause, but upon examination the collar is generally found in a state of decay. One of the best positions in which it can be planted is on a slightly raised rockery with a deep root-run of soil without manure. If possible plant it on its side, the under-side resting on a piece of rock, so that the growth may emerge therefrom, and cover the upper surface also with a piece of stone. The plants are invariably longer-lived when planted between two pieces of rock. It is a good plan to root a batch of cuttings each year and, instead of potting them, insert them in small fissures of the rock where there is soil sufficient for them. Such plants make more rapid headway in the open border during the first season, but with the greater vigour of growth are more liable to succumb to our average winters. The only way I know of increasing this plant is by cuttings, as the plant cannot be divided and seeds are not obtainable. Cuttings may be inserted at any time during July, which month I regard as the best in the whole year. To secure the cuttings intact it will be necessary to strip them carefully from the old plant with a heel attached, and insert them firmly in very sandy loamy soil in well-drained pots. Some little care will be necessary to make the cuttings stand erect, owing to the short nature of the growths; indeed, I have upon more than one occasion found it necessary to tie some of the shortest cuttings to small pegs of wood to fix them in position. It is also important that the heart of the cutting is not covered with soil, but this is easily avoided by using the wooden pegs above noted. I never make use of the knife in preparing these cuttings, but insert them just as they are removed from the old plant. While in the cutting state nothing seems to suit so well as a hand-light in a cool shady position. Artificial heat should never be employed; it is fatal. If fresh young growths about 4 inches long are secured at once and inserted quite firmly around the inside of some 5-inch pots, there should be little trouble in obtaining a good batch of young plants. I prefer the earliest made growths of the current season, or where the plants have flowered there will be some cuttings about the base of the flower-stem that will prove excellent. While yet in the cutting state, any after-watering that may be needed should be carefully done. By watering thoroughly over-night and allowing the light to remain off till the following morning no damping will be likely to ensue. When it is intended to pot the rooted cuttings this should be done as soon as possible, avoiding a rich soil. A sandy loam with broken brick rubbish added, together with a small proportion of peat in small nuggets, suits the plant well. If at hand, charcoal nuts with loam and leaf soil form a good mixture, this with firm planting invariably securing good results. Pot plants should never be wintered in a low, close, stuffy frame or pit, but by keeping dry at the root, near the glass, and clear of frost the plants will be much safer. Large specimens of this Borage-wort in the open border are rare, but upwards of twenty years ago I saw a large plant in the long herbaceous border at Hale Farm Nurseries, Tottenham. This was fully 18 inches across, and a dense tuft of growth. E. J.

HYACINTH NAMES.

Why do so many distinct varieties bear the same names? These synonyms are not only ridiculous, but increase errors, and puzzle and disappoint buyers. Really these duplicate names ought to be changed. The following list includes the leading duplicate names; No. 1 is that by which the variety is most generally known, the others ought to be suppressed:—

1. Charles Dickens, single dark blue.
2. Charles Dickens, single rose-pink.
3. Charles Dickens, single pale striped lilac.

1. Gœthe, double light yellow.
2. Gœthe, double rose.

1. Grand Vainqueur, single white.
2. Grand Vainqueur, double white.

1. Grande Vedette, single white.
2. Grande Vedette, double blue.

1. Grand Monarque, double white.
2. Grand Monarque, single rosy white.

1. Heroine, single yellow.
2. Heroine, double white.

1. Jenny Lind, double white.
2. Jenny Lind, single white.

1. Lady Derby, single white.
2. Lady Derby, single light blue.

1. L'ami du Cœur, single red.
2. L'ami du Cœur, single blue.
3. L'ami du Cœur, single violet.

1. Lord Wellington, double blue.
2. Lord Wellington, double rose.

1. Shakespeare, double red.
2. Shakespeare, double blue.

D. Guihéneuf.

EVERGREEN BORDERS OF HARDY FLOWERS.

The plants of the older kind of mixed border were—like the Grasses of the meadows of the northern world—stricken to the earth by winter, and the border was not nearly so pretty then as the withered Grass of the plain or copse. But since the revival of interest in hardy and alpine flowers and the many introductions of recent years, we have a great number of beautiful plants that are evergreen in winter and that enable us to make evergreen borders. The great white blanket that covers the north and many mountain ranges in winter protects also for months many plants which do not lose their leaves in winter, such as Rockfoils, Stonecrops, Primroses, Gentians and Christmas Roses. The most delicate of alpine plants suffer when exposed to our winter from excitement of growth, to which they are not exposed in their own home, but it is easy by good choice of beautiful things to make delightful borders wholly or in greater part of evergreen hardy plants.

These are not only good as evergreen, but they are delightful in colour, many of them covering the ground with carpets of delicious verdure, many being beautiful in flower and having also the charm of assuming their most refreshing green just when other plants are losing their leaves or dying down. Along with these numerous alpine and herbaceous plants we may group a great many shrublets that come almost between the tree shrub and the alpine flower—little woody evergreen creeping things like the dwarf Partridge Berry, Canadian Cornel, hardy Heaths, Sand Myrtles, and the Thymes.

Between these various classes we have plenty of material for making evergreen borders, and this is important, because, while many might object to the rawness of the ordinary border made of herbaceous plants as being too much in evidence near the house or in other favoured positions, it is quite a different thing with borders of evergreen plants, which may be charming and natural in effect throughout the year. It is not at all necessary that borders should be entirely devoted to the evergreen plants in order to get their good effects, because many of them, like the dwarf Rocky Mountain Phloxes and the evergreen Candytufts, make pretty dwarf edgings and masses, which vary ordinary mixed borders in a very effective way.

Of garden pictures, there are few prettier than Crocus, Snowdrops, or Scilla coming through the green, Moss-like carpets in these evergreen borders, far better for those who love quiet and natural colour than more showy effects. These quiet green borders also contrast well with richly stored, handsome borders, and are good near the house. Often narrow evergreen borders are the best things that can be placed at the foot of important walls (meant for climbers), as the common fashion of allowing Grass to go right up to the walls and houses is a foolish one, and often leads to injury to the trees. A narrow border (18 inches will do), cut off with a natural stone edging from the Grass or walk, is best: even a border of this size may have many lovely things, from early Cyclamen to the rarer Meadow Saffrons in the autumn. Besides the flowers already named, we have Violets, Periwinkles, Yuccas, Carnations, Pinks, white Rock Cress, Barrenworts, charming in foliage, purple Rock Cresses, Omphalodes, Iris, Acanthus, Indian and other Strawberries, Houseleeks, Thymes, Forget-me-nots, Sandworts, some Gentians, Lavender, Rosemary, hardy Rock Roses, and many native and other hardy evergreen Ferns in all their fine variety; these are an essential aid in the making of hardy evergreen borders.—*Field.*

Lavatera trimestris.—From a packet of seed of this I get especially bright and pale rose forms as well as pure white. Where the plants are employed in the summer bedding arrangements it is well to have the various colours in separate packets. I employ the rose-coloured forms for mixing with white and yellow Marguerites. These along with blue Cornflowers make a pretty and effective summer display.—E. M.

Asclepias cornuta, a vigorous growing plant, though hardly good enough for a border of choice flowers, is effective when rightly placed, and arrests attention by its distinctness. We saw a mass of it at Broxbourne, the tall leafy stems bearing great umbels of sweet purple flowers, which have a great attraction for bees. It could easily be naturalised in a light free soil, and one would enjoy it more by seeing it holding its own among the natural vegetation.

The single Hollyhock.—The disease and other troubles that attend the growth of choice double Hollyhocks have brought them into disrepute, but we think the single Hollyhock is worthy of more attention as a garden flower, because it can be so easily raised from seed and treated generally as a hardy biennial. The single forms have all the stately majesty of those with double flowers, and they could be used most effectively in gardens. We have seen some lately in cottage gardens in Hertfordshire and Essex, and their beauty was great.

PHORMIUM TENAX AT FOTA.

As will be seen from the engraving, the New Zealand Flax is growing on the edge of a pond, a situation which it enjoys with its roots running into the water several feet. Phormium tenax and its several varieties—tenax variegatum, Veitchi, Colensoi and atro-purpureum—are planted largely here, and most of them on the edge of shallow ponds or land that has been reclaimed from the sea. The compost in which they grow and thrive is chiefly mud and fish shells. This mud has been brought in by the tide, and as the water recedes a deposit is left behind. By building sea walls and banks to keep out the sea water the land has been covered with a sub-tropical vegetation, including New Zealand Flax (Phormium tenax), Arundo conspicua, A. donax, Pampas Grass, numerous Bamboos, Gunnera manicata, G. scabra, &c.

Fota. W. O.

TURK'S-CAP LILIES.

By Mr. Baker the genus Lilium is divided into five sections, that containing the greatest number of species being the sub-genus Martagon, the members of which are characterised by drooping blossoms with gracefully recurving segments; hence the term Turk's-cap, which is applied to many different species belonging to this section. One of the commonest species—and that which gives its name to the group—is L. Martagon, of which there are several varieties in cultivation. The common Martagon has flowers of a dull purplish or lilac-purple tint, with dark coloured spots on the inside. Though extremely graceful the flowers of this are, at best, dull. A well-marked variety is dalmaticum, whose blossoms are of a deep blackish-purple hue, that is when a good form is obtained, for in colour individuals vary a great deal. In direct contrast to this we have the white variety, perhaps the most striking of all the Martagons. The flowers of this are white, tinged with green on the exterior towards the base of the petals, and a charming outdoor Lily it is. The term "outdoor" will apply to all the forms of this species, as the blossoms have such a heavy, unpleasant scent that by many they cannot be tolerated in a confined space. This feature is also very prominent in a Lily commonly known as the Yellow Martagon, which is, however, a distinct species, viz., L. pyrenaicum, the first of all Lilies to flower in the open ground. The stem of this is very sturdy and plentifully furnished with narrow leaves, which are not disposed in whorls, as in the true Martagon. The flowers of L. pyrenaicum are of a greenish yellow tint, but there is a variety, rubrum, with reddish blossoms. This has more than once been made to do duty for L. pomponium, which is quite different, the flowers being of a rich sealing-wax red. It is more slender in growth than L. pyrenaicum, and can be distinguished from all others when but a few inches high by the dark green leaves having a narrow white margin. L. pomponium verum is the name under which this is generally known. The scarlet Turk's-cap is Lilium chalcedonicum, whose bright vermillion-red blossoms are not borne till July. It is particularly valuable as being one of the last of this group to flower, and derives especial interest from the fact that it is one of the parents of the distinct nankeen Lily (L. testaceum), L. candidum being the other. Other species belonging to the Turk's-cap group are L. Hansoni, a native of Japan, with leaves in whorls as in the common Martagon, and yellow flowers dotted with brown. This is particularly fine during the present season, especially at Kew, and it was also well shown at the meeting of the Royal Horticultural Society on June 25. At the same time an award of merit was bestowed upon a very curious and most interesting hybrid—L. Dalhansoni, whose parents (as indicated by the name) are L. dalmaticum and L. Hansoni. L. monadelphum, or L. Szovitzianum, as it is often called, belongs also to the same group as the preceding. The drooping blossoms of this are for the most part of a primrose tint, spotted more or less in the interior, but in colour this Lily varies considerably. Others are the Indian L. polyphyllum, of a whitish ground with purple spots; L. tenuifolium, something like a miniature pomponium; L. Leichtlini, one of the most graceful of Lilies, the flowers of which are of a straw-colour plentifully dotted with reddish brown; and L. testaceum, of a pleasing nankeen tint. This is a Lily that should be far more frequently grown than it is at present. All of the above succeed best in a deep loamy or ordinary garden soil, and they are all impatient of removal; indeed, many of them frequently fail to flower the first season after being transplanted. Where they are doing well it is advisable to leave them alone. L. chalcedonicum (the Scarlet Turk's-cap) is sometimes met with associated with L. candidum in fine masses in old-fashioned cottage gardens.

A very distinct section of the sub-genus Martagon consists of several species with curious rhizomatous bulbs, which succeed well in a peaty soil, though it is not absolutely necessary to their well-doing, for I have seen good examples in loam. The best known of these are L. pardalinum, L. canadense, and L. superbum. They are all beautiful species, and L. pardalinum in particular is now very generally grown. These last are all natives of North America, and another very showy species is L. Humboldti, which comes from the same continent. A sandy loam suits the requirements of this Lily best. H. P.



The New Zealand Flax at Fota. Engraved for THE GARDEN *from a photograph sent by Mr. Smith, Clarence Lodge, St. Luke's, Cork.*

Hardy flowers at Forest Hill.—These are now largely grown by Messrs. Laing and Son in the nursery at Forest Hill, and when there recently we made note of several things in the open quarters that were enduring the drought and making a good display of colour. Achillea Eupatorium and the equally sweet, but less grown A. filipendula were both fine, while the red-flowered form of our wild A. millefolia is not to be despised. Malva moschata alba was flowering freely, and Delphiniums in great variety were also conspicuous. Helenium Bolanderi, an early and showy dwarf kind, made a bright group, and H. pumilum, equally dwarf and free, promised a long succession of flowers. A mass of Pentstemon barbatus was bright. It is a pity that more do not plant this, as a good group yearly can be ensured by pulling off the side shoots, potting them up for a few weeks, and planting them out again when well rooted. The plant is worthy of this little care; whereas, if left alone, as most hardy plants are, it is less satisfactory. Chrysanthemum maximum in several varieties we saw in large quantity, and there is no better flower of the present time for cutting. Among many alpines growing in pots we noted Campanula garganica in trailing masses covered with flowers, and a variety of this species named hirsuta equally free flowering, the leaves and stems alike clothed with short hairs. C. turbinata was also conspicuous. There are few better dwarf Campanulas than this for the rock garden.

Notes from Oakwood.—Meconopsis nepalensis is doing very well at Oakwood. It is grown in partial shade and in rather a damp, very sheltered place. There is something very pleasing about this Meconopsis when in really good condition. Coronilla varia is a very free-growing, profuse-blooming species with soft pink flowers. It is one of those things that should have plenty of space and an open position. When it forms a mass some feet through it has a very pleasing appearance. What a dainty little flower is Primula scotica, growing some 2 inches in height, with mealy foliage and purplish blooms. It is, I believe, difficult to please, in southern gardens at least, but appears to have come to stay at Oakwood. Arenaria laricifolia, with white flowers and narrow leaves, is a pretty species; it is one of the best of the family. In a damp, rather shady place Galax aphylla is doing remarkably well. The spikes of white flowers thrown up boldly above the prettily formed leaves and the very compact habit render this Galax one of the most distinct of hardy flowers. It evidently enjoys moisture both at the root and in the air, and presumably dislikes hot sunshine. Xerophyllum asphodeloides is decidedly handsome, and worthy of a place in any collection of hardy flowers. If this could be had in sufficient quantity and would thrive under ordinary culture, it would be a capital thing for dotting among dwarf-growing bedding plants. A mass of the large Cranberry (Oxycoccus macro-

carpus) growing in a boggy place has a nice appearance. Azalea rosæflora, growing in company with Rhododendron Assamæflora in a sheltered position, passed safely through last winter.—J. C. B.

Campanula persicifolia alba.—It will be generally admitted that the white varieties of this group of Bellflowers are among the most useful of hardy perennials. Quite recently I was looking round a border of hardy perennials where Phloxes, summer-flowering Chrysanthemums, Roses, Dahlias, Christmas Roses, Clematis, Aubrietias and other things were to be seen, but just at the time to which I refer nothing could compare with the snowy purity of some masses of the Campanula named above. It was just in its prime and constituted the plant of the hour. Indeed, but for this particular plant, which was arranged in large clumps at intervals, there would have been an overwhelming presence of greenery in the instance referred to. The white varieties of these Bellflowers in common with the majority of the genus are readily increased. Where quantity is needed, and that quickly, it will be found much the best plan to select a good-sized clump in the early spring and, pulling it to pieces, pot the divisions, or at least those having roots attached, singly into 3-inch pots. These may then be placed in a frame or at the base of a shady wall to become established, and when this happens plant out in beds or masses as required. A fair depth of quite ordinary soil with some manure added is all that they require, and when planting do it firmly. Where only a few clumps are required the usual methods of division and firm planting will answer well. These white Peach-leaved Campanulas have, however, quite a special merit of their own, and with advantage may be planted in many spots in the foreground of shrubs, producing a fine effect. There are at least three distinct white kinds apart from that named above, which is the white form of the type, namely, the great white Peach-leaved Bellflower (C. p. a. grandiflora), a taller plant with very large white bells; C. p. alba plena, the well-known double white, and C. p. alba coronata, a kind by no means common, yet one of the most beautiful of the group. With four such excellent varieties there need be no lack of pure white flowers in the herbaceous borders in early summer. With the exception of grandiflora, which attains 2½ feet to 3 feet high, the others are usually about 2 feet high when established.—E. J.

CARNATIONS AT CHELSEA.

There is plenty of evidence that the Carnation is a good town flower, and the tufts of the old Clove along the Embankment Gardens when gay with flowers prove this. Messrs. Veitch annually have a good display of Carnations at Chelsea, which is the more creditable, because considerations of space compel them to follow the usual custom of wintering the plants in frames, planting them out where they are to flower in early spring. There are advantages in favour of this plan, for whilst gaps are decidedly too frequent in plantations made last autumn, those of the spring months have fewer blanks. Some of the self-coloured kinds are very good at Chelsea this year, and we note with pleasure that not a few of them are recent varieties of English origin, and possessed of all the essential qualities that are necessary in a good garden Carnation, namely, that they are robust, vigorous, and bear fine non-splitting flowers of clear and decided self colours and pleasant fragrance. This last most charming attribute of the flower is unfortunately too often absent, but the variety Cantab, one of Mr. Gifford's raising, is, we should think, next to the old Clove, one of the sweetest garden Carnations. A bed of it at Chelsea was very bright. Duchess of York, also raised by Mr. Gifford, was very good, the flowers of a pale flesh tint. Mrs. Frank Watts, a variety from the same raiser, was in good form, the flowers numerous and not bursting. Mrs. Fred growing beside it is also a very good white self, which finds most favour among those who show, being of the form so dear to the florist with its regular and smooth petals. The varieties Mr. Martin Smith has raised were very prominent. Aline Newman is one of the first, but not yet surpassed in its special shade of soft cerise-red, whilst the plants were as vigorous in growth as they were free-flowering. Mrs. Audrey Campbell was strong in growth, with extra tall flower-stems carrying fine, rich yellow blooms. Hayes Scarlet, brilliant in colour, perfect in form, and robust in growth, is all that can be desired, and Mephisto is quite its counterpart except in colour, this being a dark shade of crimson, rich and striking. King Arthur has an immense flower as large as that of a Malmaison, yet good in form, held up erect, and of a bright red colour. Duchess of Fife was very good, and Lady Nina Balfour remarkably fine, as it carries its flowers well on a strong stem and they are of the softest flesh-pink shade. It is undoubtedly a grand new Carnation. King of Crimsons and King of Scarlets were both good in their respective colours, and Oxonian, a fine dark crimson self, we noted as being distinct and effective. Cara Roma, dark maroon-purple, was free-flowering and very fine, of a dark and pleasing hue. Among older kinds several were very conspicuous, especially Joe Willett, which stands the bright hot sun well, and a large bed of this variety alone was very showy. Rose Celestial was unsurpassed in its special shade, and the old buff-yellow Florence we have not seen for a long time so free and good as here. A bed of Alice Ayres, too, was without a blank and as effective as any self variety.

Picotees

were very good, although the differences in the varieties are so small, that they are nothing like so important as the selfs for effect in the garden. J. B. Bryant, a well-known crimson edged variety, was good, also Brunette, which has a broad edging of crimson, and Ganymede, edged with dark crimson. Among varieties of a lighter tint, Favourite, also a well-known kind, was first-rate, the petals having the merest line or edging of light rose. Edith Dombrain and Mrs. Sharpe were good. These are rose-edged varieties of a deeper and heavier character. Lorna Doone, a pretty rose-flaked kind, was seen in good form and colour, but doubtless owing to the heat and drought a large percentage of the flaked and bizarre varieties are producing self-coloured flowers.

A BATCH OF SEEDLING CARNATIONS.

In the warm summer two years ago I was fortunate to save some Carnation seed from various sorts—Countess of Paris, Redbraes, a fine pink and purple-striped one of good habit, Germania, Mrs. S. Reynolds-Hole and some others of less note, also a large heavy scarlet called, I think, Danger. I separated all the Countess of Paris seed from the rest; I am sorry I did not separate every kind, as it would have assisted study.

The batch from Countess of Paris numbers fifty-five plants. In habit they are all strong and similar to the parent, or stronger (of course young seedlings are always strong), but in bloom they differ most remarkably. I was told by an old florist friend that the Countess repeated itself very much. I find not one blooming anything like the parent; one or two, perhaps, have nearly as nice shaped flowers, but the colour is pink-striped, crimson and purple. The extreme colour-sensitiveness of the variety is remarkable; one single and one double follow Redbraes. They will all bloom. Two or three are of a soft red or scarlet, much reduced, only six are single Jacks; fifteen are purple or crimson, derived from other purple sorts that bloomed close by; eighteen or more are frightful bursters. I infer from this that it is a fine stock to work from, for by crossing it with any coloured sort, you will be sure to get it in the seedlings; but though you may expect a good habit you will have to take your chance of the shape and quality of the flower. Now for the mixed batch.

There were here about sixty plants of much more dubious constitution; in fact, the constitution of the parent is again generally repeated, but the colours are also much better followed; some are copies of the parent, but some again have evidently gone off in habit. The seedlings of Germania are yellow, but clouded with red. One, I think, will have yellow flowers, but it is weak in constitution. The entire batch shows scarcely any outside influence, and thus there is no purple, as in the Countess. The seed of Danger is one single and one poor double, but a soft inferior red has yielded several still poorer than itself. Mrs. Reynolds-Hole seems to have yielded a number, all poorer in every way than the parent. The tall pink-striped one has given one like itself somewhat, one beautiful single of a charming shade of red-pink, and one glorious white on long, separate stalks, and another tall pale pink one, each about 30 inches high. More single Jacks occur in this lot and still more have refused to bloom; thirty-six bloomed, twenty-three failed to bloom. They all wintered very well indeed, far better than any of the cultivated plants.

The general inference is to take seed only from plants of strong, good constitution and habit, and the particular point is that some sorts are far more colour-sensitive than others. I should think that Countess of Paris scientifically crossed with others would yield excellent sorts in every shade. Of course, our English climate is very bad for this work, yet potted plants in a house which is never closed at the sides will probably secure the result aimed at.

A. Dawson.

Godalming.

Begonia Worthiana in the flower garden.—I do not know of any variety equal to the above for the flower garden, and though the hot dry weather has prevented it making as free growth as usual, the mass of flowers is charming and a relief from the general run of bedding plants. Not only is B. Worthiana very free flowering, but the colour is none too plentiful in the flower garden. The plants are readily propagated by cutting the tubers with an eye to each shoot just when starting into growth. I prefer cuttings to seed, as they flower more profusely, are ready to plant earlier, and are more regular in height. When we consider what little trouble such plants as these give during the winter and their ready means of propagation with their beauty at this season, they are invaluable for the flower garden. I think B. Worthiana the best of the small-flowered section. The newer semperflorens is also very effective and readily raised from seed. Indeed, I like seedlings better than cuttings in this section. The white variety makes a charming edging to the B. Worthiana.—G. W.

Pinks from seed.—At the middle of the summer of 1893 I sowed some seed of laced Pinks from a fine collection and was rewarded with a number of seedlings. These were planted out in the spring of 1894, but scarcely one attempted to bloom. They were allowed to remain all the summer. They passed through the last winter, though I lost many of the named varieties, and this season they are blooming grandly, and among them are several good varieties. The plants had grown into larger clumps and they have borne remarkably heavy heads of bloom. Planted out in a heavy loam, which has baked very hard on the surface, they stand the heat well, and I presume the roots have gone down deeply into the soil. It is in this fact we recognise the importance the grower of laced Pinks attaches to autumn planting in order

that the plants may become well established by the time they flower in the spring, and it also shows that two-year-old plants are the best to throw a mass of bloom. A florist who grows for exhibition would naturally prefer plants from cuttings or layers of the previous summer, because it requires only two or three good blooms on a plant, disbudding freely in order to secure them. Seedling Pinks are full of interest provided seed of a good strain can be secured, a matter of some difficulty. I notice that among some 120 plants in bloom there is scarcely a self white.—R. D.

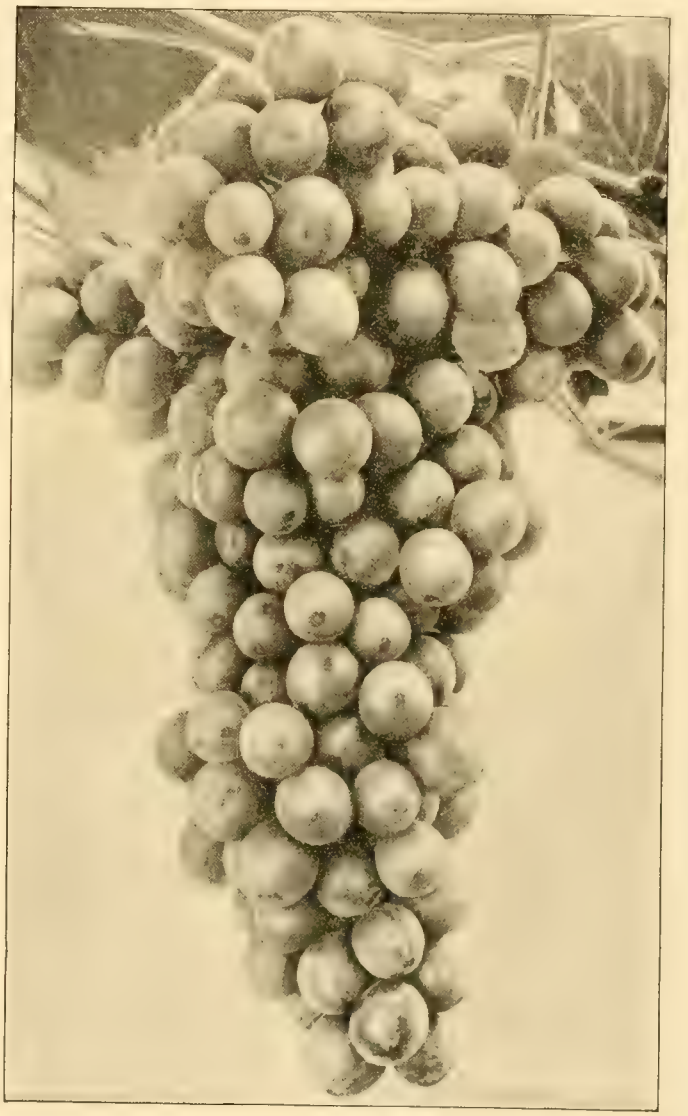
Orchard and Fruit Garden.

GRAPE GROS GUILLAUME.

Those who have been fairly successful with Gros Guillaume speak highly of it, while those who for various reasons have either never grown it or have not succeeded in producing presentable bunches are ever ready to condemn it. A middle course would perhaps best meet the case. A really serviceable Grape it is not, but there are good qualities that ought not to be lost sight of. It is one of those Grapes that may be said to need special culture. In a house of mixed late varieties started into growth early in March Gros Guillaume is very liable to fail—at least, such is my experience, and I hold that to have it at its best it ought to be started a month earlier and treated as a midseason variety. Grown in a house with Black Hamburgh and Madresfield Court, these ripening in June and July, the variety under notice would form an admirable succession to these popular varieties—that is to say, would be quite fit for use in September and October. Some think the flavour is considerably improved by keeping, say to nearer Christmas, but I have found the larger clusters keep badly when ripened thus early, and the quality has never been found fault with in September. Well grown it is a crisp refreshing Grape, and at that time of year only excelled by the two other varieties named when at their best, Muscat of Alexandria excepted.

Authorities are unanimous as to the desirability of grafting or inarching the Gros Guillaume on to the Black Hamburgh stock. On its own roots it is apt to grow too rank to be productive; whereas the Hamburgh stock has the same restraining influence as the Quince stock has upon the Pear. It unites very readily with that stock, and I have never known bottle grafting to fail. Fine rods are formed on the Hamburgh stock, and if these are thoroughly well ripened, failures to show plenty of bunches are rare. It is the soft pithy wood that fails the most often, though there are other causes of non-fruiting to be noticed. Gros Guillaume is principally grown in gardens where sensational bunches are desired. If we can be content with a few of these, all well and good; but if we leave enough of them on the Vines to overtax their energies, not only will the berries be small and foxy red in colour, but the chances are few or no bunches will appear the following season. Growing the variety on what is known as the long-rod system, young canes being laid in every season and those that have fruited once cut out, is to a certain extent a remedy for non-productiveness, but I fail to see the necessity for this. If overcropping is avoided and very close pruning never resorted to, the old rods will continue to produce fine bunches for many years. Instead of pruning the laterals to the first bud it is better to sacrifice neatness of spurs and think more of what is of greater importance, viz., productiveness. Prune to a plump bud, whether this be 2 inches or 4 inches away from the old wood.

If very large bunches are wanted, then, as before hinted, be content with three or four of these on a strong rod 12 feet or more in length. Take every pains with these, letting a fair amount of daylight and sunshine reach them, this, coupled with the maintenance of a buoyant atmosphere, ensuring a good set of berries. Under favourable conditions the bunches develop surprisingly, the uppermost shoulder resembling and equalling in weight and form an average bunch of Black Hamburgh. There should be little or no thinning of berries at first, but every shoulder and large division of bunch ought to be brought up to a horizontal position and kept so by means of strips of raffia. When finished there would be quite a network of ties, and this, in addition to giving the bunches an imposing appearance, also obviates the necessity for much thinning of berries, only the smaller berries, or enough to allow those furnished with three or more stones to develop to a large size, being cut out. As it happens, bunches 8 lbs. and upwards in weight are not of a serviceable character, and those nearer 6 lbs., such, for instance, as that represented on this page, are more to the purpose.



Grape Gros Guillaume. From a photograph by Mr. J. Cooper, Jun., Frome.

That is by no means a clumsy, ugly bunch, while the berries could almost have passed as those of Black Hamburgh, a thinness of bloom, and which is always apparent, being the only marked difference. Handsome, solid bunches weighing 3 lbs., or rather less, could always be had as thickly on a rod as good clusters are seen on Black Hamburgh rods if only we could make up our minds to pinch off the larger "shows" that are produced nearer the spurs or canes, as the case may be. Should, however, no more than one bunch show on a lateral, it could soon be seen which promised to be large, and which moderately so, or only comparatively small, and the selection be made accordingly. Much improvement might be effected in the shape of a bunch with the aid of a pair of Grape scissors, with these snipping off long, thin points and straggling shoulders. Any that are to travel to exhibitions, or to be packed for other purposes, must be fairly solid, otherwise they present but a sorry appearance when at the end of their journey; hence the necessity for a certain amount of trimming and also for very careful thinning out of berries, doing the latter piecemeal or as it is plainly seen what berries can best be spared. Remember also that medium-sized to small bunches evenly furnished with large well-coloured berries free of blemish will always surpass others double their weight, but lacking in other essentials. Labelling huge but badly coloured clusters "Barbarossa" will not mislead anyone. It may answer very well while yet they are hanging, but will have no favourable effect when experienced judges are called upon to adjudicate upon their merits.

In addition to cropping somewhat lightly, those who would have perfectly coloured bunches must also allow plenty of time for ripening. If grown with Muscat of Alexandria—and my best bunches have been produced in a Muscat house—abundance of air, or more than the Muscat may require, should be admitted at that end of the house, leaving a little front air on all night through. Give the same treatment as answers well in the case of Muscats, and foxy red berries, such as also result from over-cropping, will most probably be the outcome. I once saw twenty large clusters of Gros Guillaume ripening on a single Vine grown on the extension system, not one of which was ever good enough to send to the owner's table. Yet that Vine was raised from a reputedly good

stock, this showing that it was the cultivator's fault those bunches were of so little value. As a proof of this I have only to add that the same Vine, only less heavily cropped and also subjected to less heat, has produced bunches equal to taking prizes anywhere. If the bunches are to hang on the Vines late, then I prefer to have the roots confined to an inside border, but would rather have them rooting outside, when they can be started early and the crops cleared off before November. They stand plenty of feeding in either case. W. Iggulden.

Apple Emperor Alexander.—"W. G. C.'s" description of this fine-looking Apple is a faithful one, as he does not omit to mention its somewhat shy-fruiting propensities. I quite agree with him that it requires careful cultivation, and instead of being rigidly pruned in, thinned out when young and shortened just a little at the winter pruning. Even under this treatment it will not thrive in all districts, and the fruit, though fine and beautifully coloured, is very soft and unfit for market, except when the sale place is near home. After seeing a magnificent dish of Alexander some years ago at Lincoln November show I was induced to plant it in espalier and horizontal form, but while the trees grow well enough and several moderate crops have been borne on the cordon, the espalier has never borne a single fruit. Perhaps time may remedy this barren condition, as I trust it may. —J. C.

Gooseberry Leveller. — This fine yellow Gooseberry belongs to the yellow show section of Lancashire varieties, and is, unlike many of its class, a most profitable sort to grow, even for a poor man. On our somewhat light soil Leveller fruits heavily, ripening about the end of July, and is then delicious for dessert. It hangs better than the majority of the large Gooseberries, which are so apt to split in changeable weather. If duly thinned out when young and a good mulch given to the roots, the same being well soaked several times with liquid manure, it will prove itself one of the best exhibition varieties in existence. Those who are fond of large Gooseberries, and would like quality combined, should certainly plant Leveller. —J. C.

Two good Raspberries.—The dry summer and the severe winter have again shown which are the two best Raspberries in what may be termed a poor, light soil. The two varieties alluded to are Hornet and Superlative, and if only one sort is grown I would certainly give Superlative the preference, as though Hornet is equally free fruiting, it is not so continuous a cropper. Some of the older kinds of Raspberries were destroyed, but the strong-growing kinds of the newer section are bearing splendid crops. The canes are a little shorter than usual, but this is compensated for by the quantity of bottom growths bearing freely; indeed, there is no loss, as the canes are furnished with trusses to the base of the plants, and will thus crop later than when the fruit is produced on the tops of tall canes. Now is a good time to assist the plants and strengthen next year's canes by giving a liberal mulch, in poor soils giving liquid manure. It is well to reduce the suckers to the quantity required, so as not to rob the plants. — G. Wythes.

Ronald's Late Duke Cherry.—Many varieties of Cherries fail to crop well or grow in a satisfactory manner when grown as bush trees, but the above is an exception, as it will produce excellent crops of large fruit late in the season when grown in bush form and worked on the Mahaleb stock. Some contend that the Mahaleb stock is of little value, as trees worked thereon are soon worn out and have to be rooted out. In such cases it is not always the fault of the stock, but is owing to the lack of nutriment within reach of the roots, which, not extending far away, quickly exhaust the supplies. At the same time there are some sorts that will not succeed as bush trees on any stock, as they gum and die back until they are an eyesore in the garden. The above variety appears to be well suited for growing as a bush, seldom showing any indications of gumming, cropping freely on heavy and light soils, its large red fruits being very acceptable. It must, however, be well fed if continuous crops of large fruit are desired.— W. G. C.

Strawberry Latest of All.—In many gardens the British Queen fails, and where such is the case I would advise a trial of Latest of All. It was awarded in 1894 a first-class certificate by the fruit committee of the Royal Horticultural Society for lateness and good qualities combined. I am planting the Latest of All largely, doing away with British Queen, which fruits only sparsely and suffers badly in severe winters in low, damp localities. For several seasons I grew Waterloo, but it does not possess the flavour a good dessert fruit should do and it was discarded. Jubilee was grown for two or three years and did well, being an enormous cropper, but this was soon ousted by Latest of All on account of its fine flavour. I admit it does not ripen well at the point. This is a defect in the British Queen, but it is far more vigorous, the fruit being very fine, solid, wedge-shaped, and freely borne. Young plants of Latest of All bear freely, and it will, I am sure, become a great favourite when better known. Latest of All is a seedling from British Queen, crossed with Helene Gloede, a large fruit of good flavour. To show the long cropping qualities of Latest of All, I have been gathering it for ten days from a north border and the plants will produce fruit for a week longer. It not only does well on a north border, but forces grandly. This spring I tried it for a late lot, and as forced in frames was much pleased with the result; the foliage is firmer than that of the Queen, and, being harder, is less subject to red-spider. This variety has now been four years before the public, and the more it is known the better it will be appreciated. It cannot be propagated freely, as it makes but few runners. From strong runners planted at the end of August last year I am at this date (July 9) gathering nice fruits.—G. Wythes.

GOOD EARLY NECTARINES.

In answer to the courteous criticism by "Fruit Grower" on page 6, I think he has somewhat misunderstood my note on the above. I have not the issue by me in which I mentioned Early Rivers and Cardinal, but I have no recollection of ever naming Lord Napier, as it is an old favourite of mine. At the same time, I must state that with me it has proved at least ten days later than Early Rivers grown under exactly similar conditions, and one year it was nineteen days later. Again, this year, in a house started at the new year, Early Rivers came in just right for the Ascot week and realised a high price, as the fruit was ordered by a leading fruiterer some weeks beforehand. Lord Napier not being ready until after that event was over did not fetch half the price, though equally large and well finished. Both varieties were grown in the same house, proving that Early Rivers possesses an advantage in earliness. "Fruit Grower" will admit that a space of ten days or even half that time sometimes makes a very considerable difference in the value of fruit in the market, and I can assure him that when a man has to provide for a fair-sized establishment and sell produce to pay garden expenses, it means a good deal. Although I saw the group of Nectarines grown in pots, I somehow missed the basket of Cardinal and the small tree in a pot referred to by "Fruit Grower," so was not impressed by any difference there may have been between the two. What really did impress me was the statement made by Messrs. Rivers' representative that the trees staged were not started until after Christmas, and then grown in a rather cool house. I have grown many varieties of Nectarines, but could never boast of such success, and I think Early Rivers and Cardinal are the only two sorts that would accomplish the feat under similar conditions. As to why the latter has not been sent out, is a question beyond my power to answer. I heard nothing against its character until I saw in a contemporary that it was not recommended for outside culture. If the variety is sent out I hope to give it a trial for forcing, as it apparently answers that purpose admirably. Like "Fruit Grower," I have no interest whatever in either of the varieties beyond their value for early forcing, and if I see anything likely to pay better than older varieties, I make a note of it for future benefit. While admiring "Fruit Grower" for sticking up for an old friend like Lord Napier, I must praise him for the polite way in which he does it. Just a line as to Nectarines casting their buds on our light, hot sandy soil. Hardwicke, Elruge and Dryden always cast some buds, both inside and out, in spite of every attention to the roots and the trees being kept entirely free from insect enemies, and no other reason can be given than that the soil is unsuitable.

W. G. C.

SUCCESSIONAL MARKET STRAWBERRIES.

Whenever a new Strawberry makes its appearance one of the first questions asked by many is, "Will it travel well?" as when the overplus fruit from so many private gardens is sent to market, it matters little how good a cropper or how richly flavoured the variety may be, few care to plant it unless the first-named qualification—"firmness"—is present. The lack of this is the one great drawback with Noble. Like the old Keens' Seedling, it is too soft for sending to a distance unless packed carefully in single layers, which it will not pay the market grower to do. If the market is close at hand, then these two heavy and certain croppers may be grown and made the best of, but for consigning to a long distance by rail packed in bulk they are next to useless, the money returned from the salesman, after his commission has been deducted, being often inadequate to pay for labour, to say nothing of a margin for actual profit; and what is true of Noble and Keens' is equally so of all soft-fleshed varieties from a market point of view. Taking cropping powers, flavour, and solidity combined, I find Competitor in the front rank for first early supplies. This Strawberry is very firm and distinct in flavour, which is rich for an early sort. It is also very hardy and vigorous in growth, and, what is perhaps as important as anything, it produces fruit over a very long period. Following this, that old and well-tried variety, Vicomtesse Héricart de Thury, must still rank high as an all-round profitable sort, for although the individual fruit is somewhat small, the crop which may be secured from well-managed plants is enormous. Those who are thinking of planting for market, and who have not what is termed a good Strawberry soil, should certainly include Vicomtesse for very early work. Royal Sovereign will doubtless take a prominent position as a market Strawberry, but the price of runners at present proves, of course, a barrier to growers of small means. I have previously expressed the belief that Gunton Park will eventually become one of the principal main-crop Strawberries. It comes into use just when the best fruit of Royal Sovereign is over, is as large as that variety, of a much darker, richer colour, while the flavour is good enough to please even the most fastidious. As a firm, good travelling Strawberry Gunton Park is about the best I have ever handled. Another very good point in its character is the one so noticeable in its relative, Lord Suffield, that of yielding its fruit on bold, stout stems, which do not easily fall about and

allow the fruit to rot through contact with the wet ground. Sir Joseph Paxton must still be included in the list of market Strawberries, for although there are gardens in which it refuses to fruit, as a rule it does well, the fruit firm and of good colour and flavour. On our light soil Sir Joseph Paxton is not at home, for although the plants grow freely enough, not more than two or three in a long row yield fruit. I therefore abandoned its culture, and substituted a Hertfordshire raised variety called Premier, much like it in general appearance, and a very fair cropper. President, now much grown for the London and other markets, is none too firm for travelling, and as it ripens simultaneously with Gunton Park, it will, I expect, be less and less grown as that fine variety becomes better known. Sir Charles Napier is a profitable Strawberry where it succeeds, possessing every good quality needed to make a good market sort, but unless on good land, retentive of moisture, it is often very disappointing, the plants dying off wholesale. On our light soil it will not grow at all. For following on, Lord Suffield will take a leading place in fields and market gardens generally, as its habit is good, having ample foliage to shield the bloom from late frosts. It crops enormously, and the fruit when ripe is almost as dark as that of Waterloo, the flavour is delicious, making a splendid preserve. Newton Seedling, still later, should be included in the list, being very free both in growth and cropping, and most useful for preserving. Finally, Latest of All is indispensable for prolonging the season from ten days to a fortnight after other sorts are done. The fruit is large, handsome, and of extra good flavour, well repaying good cultivation.

The above list of good market Strawberries might be lengthened, but I see no need for it, as the foregoing varieties are A1 and crop in rotation over the whole of the Strawberry season.

J. Crawford.

Cherry Governor Wood.—I do not think there is a better cropper than this, and as regards quality it is difficult to beat. My note as regards its cropping qualities is as a wall tree on a favourable aspect. I have very fine trees on a west aspect and they never fail to bear freely. This variety, of American origin, is also known under the name of Dr. Kirtland, and is said to be the best bearing Cherry of its kind. It possesses several advantages over some of the Bigarreau type, as the tree does not canker or gum and succeeds indoors or out. When given a wall in a cool house it is very fine. This season I gathered the first fruits on June 15, and have continued to do so daily since. I have no knowledge of its behaviour as a bush or pyramid.—S. H. M.

Thinning Apples.—In many parts there are very heavy crops of Apples, and unless some of the fruit is thinned out early, the fruit will be small and of comparatively little value when ripe. On standard trees it is not an easy matter to thus thin the crop, but a large number of dwarf or low-growing trees can be gone over in a short time, and all who have had much experience in marketing Apples know the trees that have been relieved of a portion of their burden swell up the fruit that is left until it attains a large size, and realises a high price when sold. My practice for a number of years has been to go over the dwarf trees about this time and remove any fruits that are badly shaped, blemished by insects, or otherwise defaced, sending them at once to market, and I find the practice pays handsomely. At the same time it is advisable to state that it pays to sort the Apples into two sizes, placing all the largest fruit in one set of hampers and the small ones in others; the former sell very well for cooking and the latter are eagerly purchased from the salesman by jam-makers, so that there need be no waste at all, for, though no fancy prices can be expected, there is a return that more than pays for the labour and freight charges, to say nothing of the benefit received by the fruit remaining on the trees. Again, when marketing the crop there is no trouble in grading the Apples, as all the inferior ones have been taken off; in fact, it would be difficult to estimate the value of the early thinning of heavily cropped trees. In some places all the largest Apples are picked immediately they are of a good market size, the smaller ones being left on to grow large. After trying that system against the one first mentioned, I found it far from remunerative, as the small ones that had been left never attained a really good size, and somewhat low prices prevailed for the same from beginning to end. But by the method advocated, such prices are realised for the Apples when finally gathered as should convince the most sceptical that they will pay well in this country for cultivation in spite of all competition from abroad. —W. G. C.

Fig Osborn's Prolific.—At page 5 "J. C." notes the good qualities of this well-known Fig. He finishes his note with the remark that some of the earlier forcing Figs which have been introduced since the advent of Brown Turkey are rather small, Osborn's being the reverse and most prolific. I do not quite agree with the remarks as to the newly-introduced varieties being small, as I am inclined to think that what is lost in size is gained in quantity and in earliness as well as freedom from dropping, while they are equally, if not more prolific. For the last few years I have had some twenty varieties on trial, but do not find I have noted Osborn's as one of the best; but, of course, much depends upon the mode of culture and the season at which the fruit is required. Doubtless for dishes at this date or the end of June, Osborn's may be all one can desire, but if you require Figs in March or April I certainly would not despise the newer, though somewhat smaller, varieties. For general culture, planted out, Osborn's comes large, and is of excellent flavour, and a grand Fig for cropping at this season, but for early forcing I do not think it can be compared to White Marseilles, Pingo de Mel, or St. John's. In Mr. Barron's excellent article on Figs and their culture at Chiswick he gives but little notice to Osborn's Prolific; indeed, he classes it as synonymous with Brown Turkey. We all know how prolific the Brown Turkey is—its value for second cropping and its fine fruit when well grown—but I am inclined to think there are some distinct kinds of this variety, as I have trees in the same house quite different in every way, one being very similar to Osborn's; indeed, when the fruit is quite ripe it only appears a little rounder in shape. For early forcing I would advise "J. C." to give Pingo de Mel a trial in pots. It is a fine Fig and of splendid flavour, earlier than Osborn's, and equal in quality.—Fig Grower.

Currants.—Two very fine Currants from Jersey presented to the fruit committee at the last Drill Hall meeting, one white, the other red, and under new names might very well have passed as new and distinct, were there afforded no means of comparison with other varieties. Fortunately, there were present at the meeting not only several varieties finely fruited, shown on branches by Messrs. Veitch and Sons, but further, Mr. Barron had brought up from Chiswick quite a considerable collection, covering no doubt all the varieties in cultivation, and these even showed in several cases distinctness in leafage only, the fruits being almost identical. Of the Langley varieties, Red Cherry, Fox's Large Grape, La Fertile and Victoria were the finest reds. The last is the best late variety, and a capital one for walls or bushes to net up to keep into the autumn. The whites were White Transparent, very pale; White Crystal and White Dutch. Of the Chiswick collection a few of the finest were Wallace's Seedling, Mallow-leaved, Red Grape and Red Cherry, also White Dutch and White Cut-leaved. It was easy enough to see that with these varieties there was ample likeness to the two sorts from Jersey; hence we were saved from additions to an already too large list of Currants, as the distinctions between many are so very minute. The Mallow-leaved and the White Cut-leaved are very distinct in foliage and both carry very fine clusters of fruit, and they are varieties that well merit notice. —A. D.

STRAWBERRIES.

In spite of the long drought the crop has been a fairly good one where mulching was done early, with an occasional soaking of water since. At the same time some varieties have greatly excelled others both in crop and size of fruit, though grown under similar conditions on the same quarters. Royal Sovereign confirms the good opinion already expressed by many practical men, and I believe this variety will become as popular with market growers in the future as Sir Joseph Paxton has been for so many years. It was one of the first to ripen its fruit, and has continued in bearing for as long a period as any sort that I grow, the fruit being large, firm, and of excellent quality. La France has done remarkably well this trying season, being only second to Royal Sovereign in cropping, size of berry, and firmness, and equal, if not superior, in flavour. The foliage is somewhat scanty compared with that of many other varieties on our light soil; consequently the plants would suffer in a dry time unless well mulched, but treated as an annual, and done thoroughly well, it is a very fine variety. Helene Gloede, though not so richly flavoured as the preceding varieties, has run them closely in weight of crop, and appears to withstand drought better than any other sort, the foliage keeping very fresh and green, forming a good shade to the berries. Sir Joseph Paxton, Sir Charles Napier, James Veitch, La Grosse Sucrée, and Auguste Nicaise have proved about equal in bearing, the two last named, however, surpassing the others in flavour. President set a splendid crop, which swelled to a nice size, and then the plants suddenly collapsed, and the fruit was useless. It should be stated that the plants had been mulched and given several thorough waterings. It would be interesting to know if President has behaved in a like manner in other places, as I never recollect its failing so completely in former dry seasons. Vicomtesse Héricart de Thury always succeeds admirably, and for home use is one of the most reliable varieties that I know, being as valuable for forcing as in the open air. Latest of All is, I think, one of the grandest late Strawberries in cultivation. Wet or dry seasons seem to have little effect on its constitution or bearing powers, and the size of fruit and delicious flavour make it worthy of a place in every garden. Grown as an annual the fruit is very fine and abundant; if allowed to stand more than one year on our hot soil, the berries are much smaller, and, in my opinion, suffer in flavour as compared with those from one-year-old plants. Waterloo I had to root out a few seasons ago, as my employer had a decided objection to the mulberry colour of the fruit, but where this is no detriment the variety is well worth growing. It is of no use to try to obtain full crops of Waterloo from plants one year old; for several years I tried it on that system by the side of other sorts, and found it would not succeed under two years. I had a few choice varieties sent me late in the autumn of last year, but, owing to the severe winter and present drought, I have had no opportunity of proving their merits, and it would be unfair to criticise them now, but I hope to give a few notes on them another season.

Although mulched and well watered, our plants are making scarcely any runners; if this

is general, there will be some difficulty in securing sufficient young plants to make new beds shortly, and in such cases extra attention should be given to those beds already formed, by supplying plenty of moisture not only to the roots, but overhead as well, thus enabling the plants to mature bold crowns for the future, and also warding off that enemy so common this year, viz., red spider. On all sides we hear of this mite infesting hardy fruit trees of all kinds, and, unless treated as suggested, Strawberry plants will not escape, if not already attacked. A thoroughly good washing two or three times a week with the garden engine will not only assist to keep the plants clean, but also act as a check to the enemy on fruit and other trees. W. G. C.

ROSE GARDEN.

ROSES AT CHESHUNT.

THE present season has not brought out any Rose of Continental origin worthy of mention so far as we have seen, but most Rose growers regard Kaiserin Augusta Victoria as a good variety. Several promising new varieties of the Hybrid Perpetual section are now flowering with Mr. G. Paul, all of his own raising and each in sufficient quantity to give a very good indication of its merits generally. T. B. Haywood is one of them and bears fine full flowers of a light crimson shade, in form resembling those of Alfred Colomb. They are sweetly scented and the growth of the plant is robust. Haileybury is also a fine Rose which received an award of merit at the last meeting of the Royal Horticultural Society. It is even stronger in growth than T. B. Haywood, has fine flowers of a most distinct shade of rose, which deepens into rosy crimson in the outer petals. Both of these are up to the exhibition standard, and may therefore be safely tried by all growers. Bacchus attracted our notice at the Palace show, where Mr. Paul had a bunch of it in a class for Roses in bunches of not less than seven trusses. It should make a very good garden Rose, being of vigorous growth, and, judging from the successional buds developing, a true perpetual bloomer. Its beauty is in the bud state, and if free it will make a gay bush or give abundance of flowers for cutting. The buds are long and pointed and of a rich velvet crimson. The colour becomes duller as the flower expands, but even with all the wealth of red Hybrid Perpetuals there is room for Bacchus, with its bold rich buds, that can be cut with long shoots. Alan Cheales is a distinct variety, with a globular flower of a soft rose colour, the inner surface of the petals a bright shade of rosy cerise, which gives a pretty glow to the centre of the flower. Paul's Early Blush, though not new, may be mentioned as one of the acquisitions of recent years, charming in its tender colour, but above all most valuable for the quality implied by its name—that of earliness. It is by a long way the earliest of light-coloured Roses, and Mr. Paul is preparing to plant a very large breadth of it solely for furnishing cut flowers, its earliness adding to its value for this purpose. We might remark here that Paul's Early Blush and Mrs. Harkness are synonymous.

A series of beds filled with some of the very best

ROSES FOR GROUPING

was an instructive feature, as one could see their merits at a glance. Mme. Chedane Guinoisseau was beautiful, each shoot crowned with a cluster of sweet and bright yellow buds. This Rose has been in the country now more than ten years, but not being up to show form, it has remained in comparative obscurity; yet, in common with Mme. Charles, Mme. Falcot and others, it is just the Rose to make a gay group of lasting beauty. Gustave Regis, Mme. Pierre Cochet and Mme. Pernet-Ducher are all of similar character and certain to give a pleasing effect to those who break away from the conventional plan of planting single plants and have a bold mass or group of them. Camoens, now well known, was very good, and we have its counterpart in another colour in Marquise de Salisbury, a recent addition that has been much praised and merits all that has been said in its favour. Cheshunt Scarlet is evidently one that must not be overlooked. Its flowers are brighter than those of Marquise de Salisbury, larger, borne erect in clusters and brilliant in effect. La Fraicheur also makes a pretty free-flowering group, most distinct in its shade of pink; and Augustine Guinoisseau, in pale blush, makes one of the longest flowering and certainly one of the sweetest groups of any Rose.

MULCHING ROSES.

ON paying a second visit to Colchester on July 2 I found a further secret of the success of some of the Rose growers in the application of a surface mulch of sewage, which I have found in a long practice one of the most useful and powerful stimulants for Roses. I happened to drop in whilst the last liquid mulch of the season was being applied by Messrs. Prior and Sons to large plantations of Roses, and amongst the extremely vigorous plants and forests of advancing buds it was difficult to realise that zero frosts, scorching drought and whipping winds had prevailed on each side of these sloping banks of Roses throughout the year. Some may object to designating a sewage dressing a mulch, but I like the phrase. House and town sewage has, as a rule, sufficient solids in suspension to form a scum or deposit on the surface of the land, and if this is broken up or mixed with the soil by hoe, rake, or harrow, a surface covering or mulch of a very valuable sort is provided. Such feeding mulches as town or other sewage, however, should not be applied to Roses too late in the growing season, as such powerful stimulants continue growth and bloom too late in the year, and thus render the plants easier victims to winter or spring frosts.

Roses, however, on poor or shallow soils may be greatly benefited through their period of semi-dormancy by liberal dressings of sewage. It is important to bear in mind that Rose roots are seldom or ever at rest unless frost-bound, and likewise that there is often a serious loss of sewage in winter which might be utilised in the nourishment of the root runs of our Roses.

The other mulch in general use through the great Colchester Rose grounds is 2 inches or so of loose soil. Neither water nor sewage is available in the majority of the Rose gardens; the soil in most of these may be described as a loam leaning to heaviness rather than friability—in fine, a Rose loam. This soil, improved by liberal and deep culture and alternating crops of roots and corn, proves a sure and certain antidote to Rose sickness, and lays the foundation of success deep and strong.

Other mulches, such as those of solid manures in various stages of decomposition, strawy litter, chaff, tan, cocoa fibre refuse, ashes, burnt earth, &c., are also used. But few have sufficient of these to cover acres of ground. Neither are they needful, as is proved by the present vigorous growth and crowded blossoms on the Roses around Colchester after months of parching drought. To keep the moisture in the soil and the parching heat out, gangs of men with sharp hoes are constantly among the Roses keeping down weeds, uprooting suckers, and forming a surface tilth almost invulnerable to the entrance of drought from above or the escape of moisture from below. So soon as they get to one side of the field of Roses they return to whence they started, and so on and on whilst the drought lasts, strengthening, through hoeing, the surface mulch of earth. D. T. F.

Rose Emperor de Maroc.—One so seldom meets with this old Rose, that I thought it had been discarded to make room for newer kinds. In Messrs. Jackman's Woking nurseries I saw a large batch of it. The flower is very dark, probably the darkest crimson of any Rose. The flower does not grow to a large size, nor is the form up to the standard required by exhibitors, hence its scarcity, yet the plant is free-blooming and a fine Rose for the garden.—S.

Rose Mrs. Anthony Waterer.—This is a new Rose that has been raised by Mr. Anthony Waterer, Junr., of the Knap Hill Nursery, by crossing Rosa rugosa (syn., R. ferox) with the well-known Hybrid Perpetual General Jacqueminot. The result has been to produce a very beautiful Rose of free and graceful habit, with flowers of exceptional fragrance. The foliage, whilst quite different from that of R. rugosa, is suggestive more of that parent than the other. The leaves, consisting of five or seven leaflets, are firm in texture, serrated, and not so much wrinkled as in R. rugosa. The petioles and the branches are armed with small decurved spines, stouter and less needle-like than those of the parent species. The flowers are semi-double and of a rich crimson colour, the outside of the petals having a rosy tinge. They are, I think, equal in the sweetness and strength of their fragrance to any other Rose, and the profuse flowering character of this hybrid may be judged by the fact that this year between seventy and eighty flowers, each measuring from 3 inches to 4 inches across, have been produced on a single branch of last year's growth. In habit it is more spreading and elegant than R. rugosa.—W. J. B.

GARDEN FLORA.

PLATE 1023.

THE BAHAMAS MALLOW.

(WITH A COLOURED PLATE OF SPHÆRALCEA ABUTILOIDES.*)

THIS plant belongs to the Mallow family which is most familiar to us in gardens by the Hollyhock and Abutilon. Although it was singled out by the artist as a plant worthy of a place among the portraits in the "Garden Flora," the plate would not give one the impression of the plant being such a beautiful one as it really is, though the elegance of a flowering spray is admirably shown. It appears to be an old garden plant, having been introduced from the Bahamas 170 years ago, and re-introduced to Kew a few years since, from whence we hope it will be again distributed to English gardens. It is a greenhouse plant, or rather should be grown in a warm greenhouse. Its chief value as a garden plant lies in the fact that it blooms in winter, when it is specially welcome. The specimen figured would lead one to suppose it to be of straggling growth, but herbarium specimens at Kew show it to be very robust. It is a wild plant with Abutilon-like leaves twice the size of those drawn, and flowers freely on stout stems. Probably it would prove more valuable for winter flowering if it were planted out during summer. Well-flowered plants of it in midwinter are unusually attractive, the deli-

* Drawn for THE GARDEN in the Royal Gardens, Kew, by H. G. Moon, January 11, 1895. Lithographed and printed by Guillaume Severeyns.

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SPHAERALCEA

cate colour being effective, as in the temperate house at Kew, while the plants last in bloom a long time.

There are many Sphæralceas, but only a few seem to be suitable as showy garden plants. In turning over the specimens at Kew I came across some very fine species, which appear to be all Mexican and South American. Besides S. abutiloides, the others of a similar character are S. umbellata, with fine heads of large flowers borne in an umbellate way and broad palmate leaves; S. nutans, with very large Abutilon-like flowers and also Vine-like foliage; S. vitifolia, with leaves like the common Vine and large showy flowers. Both S. umbellata and S. nutans are, I believe, in cultivation, and there is a fine specimen from Mr. Gumbleton, in whose garden in Ireland the plant appears to grow with native vigour. These Sphæralceas I have named are not merely of botanical interest, but really fine plants that one should be able to obtain in the best nurseries, and it ought not now-a-days to be a difficult matter to obtain seeds from their native habitats.

W. G.

The Week's Work.

HARDY FRUITS.

Strawberries.—In spite of the drought in most parts of the kingdom, the plants, when well treated in the way of food and often renewed, have given good crops. The cultivator will now be making preparations for another season. There is considerable gain by growing young plants in such seasons as this and 1893, as being more robust, they are better able to resist drought, the soil can be more highly cultivated, and the return is much better, the fruits larger and of better quality. Another point often lost sight of is that young plants are less subject to insect pests and stronger. The soil for future crops should now be prepared by deep digging, or trenching if required. Strawberries may with advantage follow crops that have not been a long time in the soil, but even then ample supplies of food are essential, as it must be borne in mind that quick growth and large and well-matured crowns are necessary. In shallow soils it is useless to trench; deep digging will suffice, feeding from the surface afterwards. No matter what position be given, much depends upon the plants, mode of planting, and after-management. At this season it is well to take into consideration the value of new varieties. To plant these wholesale is not advisable, as it is well to see how they thrive in the soil. From most quarters a very good account is given of the new Royal Sovereign, and as far as my own experience goes I consider it a good variety for all soils where earliness, size and quality are considered. For late work the useful Latest of All is well worthy of a trial. Whatever kinds are planted it is important to get strong runners and to plant as early as possible.

Layering for planting.—When the layers of new varieties or others are procured from a distance, it is well to get them sufficiently strong for planting. At times they are sent none too strong, and it is well to pot up such into small pots, placing under a north wall or shading for a short time. In this way no time will be lost, as if planted as received there are losses and much labour in watering. Small runners may also be planted in lines rather closely, and put out early in the spring they make fine material for another year, but should not be allowed to fruit the same season as planted. When plants are secured from home-grown stock, they should be layered as soon as possible. I do not think small pots can be beaten, although equally good results may be secured by placing some good soil in the rows between the plants and firmly pegging the strong runners into the new soil, taking away surplus growth and keeping the runners watered daily. Another older, but still good method is to chop square pieces of turf and plunge in the alleys, layering the runners into the turf.

Planting Strawberries.—Firm planting is most important, as unless the plants are well trodden in in light land growth is not robust, and in winter the frost lifts the plants out of the earth. It is a good plan to draw drills in light soils, this allowing of watering freely. The distance between the plants depends upon the variety and the space at command. There is no gain in crowding; 2 feet is none too much between the rows, and more should be given for plants fruited more than one year, 18 inches being allowed between the plants. For such varieties as King of the Earlies, Black Prince, or Alpine these distances do not apply, 12 inches between the plants being sufficient if not left too long in one place. I only allow one crop of fruit, and requiring many runners for forcing I plant at 2½ feet apart in the row with 12 inches between the plants, planting at the end of July or early in August strong rooted runners. These soon attain a good size, and are not allowed to fruit the first season after planting. When the runners are obtained, every other plant in the row is cut out and the beds left to fruit the following season. In planting it is well to spread out the roots so that the top roots are well covered, but not to bury the leaves or the centre of the plant, and to give ample moisture in dry weather.

Early Strawberry beds.—Those who can devote a small space on a south or raised border would do well to plant specially for early fruits. Many can devote a small space in front of fruit houses on borders with the Vine or Peach roots inside, and in such a position may gather fruits ten days in advance of the open quarters, as it is easy to protect a small plot and to thin the early fruits. A few dishes in advance are valuable and greatly prolong the Strawberry season. In late springs or cold weather such quarters may readily be covered with a few spare lights or hand-glasses. For this purpose Noble answers well; it may not be all one may desire as regards flavour, but it comes large, is of a bright colour and very early. Planting may be done at 2 feet or even less if grown for one year's fruit, and for this purpose it is not wise to fruit longer, early and large fruit being secured from young plants.

Late beds are almost as important as very early ones. A north border is a good position for the late lot, and the heavier the soil the better. I have noted the importance of Latest of All, a new variety for late use, and which so far surpasses the Pine section, and will thrive where British Queen fails. Oxonian, Waterloo, and Elton Pine are all suitable for north borders. To these should be added Aberdeen Favourite, superior in flavour to Oxonian, and a valuable late variety. The same cultural details are necessary as advised for the earlier crop, but if possible more space should be given to allow of mulching and keeping the plants clear, the growth being more robust. For late fruit I do not advise a sloping border, as the moisture so necessary for the plants is drained away. Plenty of space is required between the rows to prevent mildew being troublesome in wet seasons and to allow the fruit to dry freely.

Raspberries.—To prolong the crop, which in this district is a heavy one, it is well to mulch freely, using partially-decayed manure, as the latter will retain the waterings which will be required and assist the new growths at the base to grow freely. In light gravelly soils this fruit soon fails if not given moisture. It is well to reduce all suckers, as these absorb the moisture so necessary for the plants, and though a few of the best or strongest suckers will be necessary to grow on, these should now be selected, and not more than six left at each stool, finally thinning to three or four when the crop is cleared. The strong kinds, of which Superlative is one of the best, are more vigorous than older kinds, and should not be crowded. After the crop of the early kinds is cleared the old fruiting canes should be cut out, thus throwing all the vigour into next season's fruiting canes.

Autumn fruiting raspberries.—These, where at all thick, may be thinned if very fine fruits are desired, and in some places it is necessary to tie out the canes to admit light and air. The same remarks apply as regards mulching, but of course the reverse treatment as regards sucker growth. To induce plenty of fruiting spurs from strong canes it is well to top the last-named, this causing a much better set, and in seasons of drought or in light soil a good watering with liquid manure is well repaid.

G. Wythes.

THE KITCHEN GARDEN.

Latest Celery.—In most places rain has now fallen, and it will be well to get out late-raised Celery. If pricked out in warm nooks and corners at the time advised and kept well watered it will now be fine stuff, not at all liable to run to seed either in late autumn or early spring. With a favourable autumn this very late batch will often grow to a respectable size, quite fit for table use and to mix in the salad bowl. If not, however, it is always useful to use for flavouring and soups, the main lots being spared for more important purposes. The trenches need not be quite so deep as usual and the plants may be rather closer to each other. When planting is completed, if a good mulch of old Mushroom manure is spread down each side of the rows and one good soaking given, it will generally take care of itself until freeing the sticks from suckers and the first earthing up are done. If the two varieties Leicester Red and Standard-bearer are grown as advised at sowing time, there will not be one in a hundred that will perish through rot, be the winter ever so wet, as sown and brought on in quite a cool temperature their constitution is so hardy.

Coleworts.—The present is the best time for making the principal sowing of the good old hardy London Colewort. Purchase the seed from some reliable house, as there are inferior strains of this vegetable which run out coarse and flavourless. I usually sow mine on a south-east border from which early Potatoes or Peas have been cleared. This I prefer to a due south one, as the young seedlings are more easily kept moist and they do not come on so rapidly. The beds are simply marked out and the seed sown broadcast, scuffling it in beneath the surface with a small rake, finally treading and levelling. I always net my Colewort beds as soon as the seed is sown, as if postponed the seed often comes up before one is aware of it, and the chaffinches get them all. My dates of sowing are the 7th of July and from the 15th to the 20th; the latter sowing often proves most serviceable if the autumn is very warm and the first batch grows away too speedily. There are still very many gardeners who do not grow Coleworts, but all should do so, as nothing equals them for hardiness and flavour.

Cabbages.—I am not an advocate for extra early sowings of spring Cabbage, as frequently in very mild autumns the plants grow so rapidly, that should very sharp frosts occur in December, they get such a check that they heart in at that season when the Coleworts are plentiful and preferable, and thus time and labour are lost. In large gardens, however, where ground is not an object a sowing may be made about the 10th or 12th of the month, but not of the very earliest varieties, these being more susceptible to the evil above referred to than the larger varieties, such as Enfield Market. Of course, in northern, cold districts the above date may be chosen for the main crop sowing, otherwise from the 25th to the end of the month will suit best. I make a second sowing the second week in August to follow the first batch of Ellam's, Cocoa-nut, and Earliest of All, and for putting into frames for winter protection a small sowing should be made about the 20th of August. Do not confine yourself to one or even two sorts; three or four should be grown, bolting and other failures being thus guarded against. Early Offenham, Mein's No. 1, and Early Rainham, which some think identical with Ellam's, are all capital Cabbages of very rich

flavour. Sow on the level in preference to raised beds and protect from birds. The red pickling Cabbages may be sown with the second batch of spring varieties, and a little seed also with the latest for wintering in frames.

CUCUMBER HOUSE.—Plants which have been bearing fruit since March will in many instances show signs of semi-exhaustion, and must be treated accordingly. If others, either in houses or in pits, are now bearing, it will be well to allow the first-named lot a partial rest. Thin out the wood freely, leaving only that which is more robust and free from spider. Give a good rich surface-dressing and feed liberally twice a week. Keep the foliage well syringed, close early, and allow no fruit to swell off for three weeks or so; if a little freedom in growth is allowed instead of close tying in it will aid the plants to grow out of their weak state, and the growths can be tied in when the plants are again allowed to bear more fruit. I have previously spoken in praise of Perpetual Bearer both as a house and frame variety, and this season my high opinion of it is strengthened. It has a grand constitution, the fruit grows rapidly and in great numbers, the quality being good. If wanted for exhibition it may be had 26 inches long, with the flower still on the end. This would make a capital Cucumber for market. In surfacing Cucumber beds always use plenty of opening material, such as mortar rubble, so as to allow of the copious waterings passing away freely. Much harm is often done to Cucumber plants that have been bearing for some time by allowing the fruit to hang on too long, thus unnecessarily robbing the plants of their vitality. The fruit should be cut as soon as ready and placed in cool quarters, the stem end being laid in damp Moss. Cucumbers that are the least aged should not be used in the salad bowl, as they impart a bitter flavour to the salad and are not wholesome.

BLANKS IN WINTER STUFF.—Owing to the protracted drought during June, a good many blanks have occurred in quarters of winter greens, especially Brussels Sprouts, these having taken the disease commonly known as "finger and toe." The foliage then rapidly changes from a green to a sickly bluish colour and generally becomes infested with insects. These blanks should now be made good from the seed-beds, and if the young plants are at all overgrown, take out a good sized hole and make the soil about the roots very moist; they will then go away. It is useless pulling up these extra large plants in the usual way and planting with a dibble, as thereby all the principal rootlets are ruined. Of course, where any extra late sowings of sprouts and Kale were made, the plants from these beds may be used, as with a fine autumn they will yet make good-sized stems and be extra valuable on account of yielding their sprouts later. If any healthy plants of late Broccoli, such as Late Queen, Methven's June or Model are still in the seed beds, they may be planted on a north border, if such can be spared, from which some other crop has been cleared, no further disturbance of the ground being advisable. In such positions Broccoli often stands the winter better than in more open sunny ones, growth being more gradual and less sappy, the hard root-run assisting this. J. CRAWFORD.

Notes from Holme Lacy.—A great feature of the place is the immense Yew hedges surrounding the flower garden. Some idea of the size and extent of these hedges may be formed when it is stated that it takes two men six weeks to trim them once. The flower garden is well protected from cold winds by the high thick hedges, and at the time of my visit (end of June) presented a gorgeous appearance, two Tropæolums—Mrs. Clibran, a splendid yellow, and the better-known Vesuvius—being very fine. Herbaceous plants are grown in two long borders backed by the Yew hedges. The drought apparently had not affected the plants in the least, as they all looked remarkably healthy; one plant of Lilium giganteum, with eight flowers on a spike, was particularly striking. A short distance away are the lakes, well stocked with Water Lilies. The clear water, large green leaves and great quantity of charming white flowers produced a picture that my pen fails to do justice to. In the shrubberies the frost of last winter has made no unsightly gaps, and not a tree or bush has required cutting back. Roses also escaped injury, and the Teas in the Rose garden were covered with very fine blooms and buds. Carnations are very extensively grown in nearly all known varieties, Mrs. Reynolds-Hole, Miss Joliffe, Uriah Pike, Andrew Campbell, King Arthur, and Miss E. Terry being extra good. Sweet Peas are grown in great variety and quantity, as they are so much appreciated for room decoration; in fact, all flowers that will travel well are largely grown. In the kitchen garden the crops looked remarkably well for such a trying season. The fruit at Holme Lacy has long been famous, and is now well kept up to its past standard of excellence. Pears of all sorts are particularly fine, the well known cordons on the wall being especially good. Apples and Plums are bearing profusely; some standard trees of Blenheim Orange are bending down now with the heavy crop. Melons and Tomatoes are grown in quantity and their general condition left nothing to be desired.—W. G. C.

KITCHEN GARDEN.

CABBAGE FOR SPRING SUPPLIES.

THOSE who require early spring Cabbages must now make preparations. In giving advice at this season it will be necessary to take into account localities, soils and varieties. It is most difficult to draw a hard-and-fast line as to the exact date for sowing. Every grower has a certain date for sowing, but those who may have failed previously will be guided by the growth of the plants and sow accordingly. On the other hand, I do not advise undue delay, as small weak plants do not winter well. I do not rely upon one sowing. Much depends upon the variety, as a large coarse Cabbage raised too early invariably bolts, whereas such kinds as Ellam's may be sown at any date from July 10 to July 20, and will not run if there is no check in planting out or crowding in the seed bed. I need scarcely refer to the value of spring Cabbages. Few crops are more valuable, and few vegetables more appreciated after a long winter. To obtain a good breadth of Cabbage as early as possible in the spring the grower must be on the alert at this date and select a variety that will not run, and the earlier it turns in the more valuable the crop. I am writing from a private grower's point of view, as for market much larger heads may be necessary. Still, even for that purpose I fail to see the gain, as smaller kinds with compact folding leaves winter best, do not run with extremes of weather, and being planted more closely together there is a larger number, which, with earliness, makes up for size.

Ellam's Dwarf is, in my opinion, the very best for first crop, owing to its hardiness, earliness, and freedom from running. Out of many thousands this spring, after a severe winter, not one plant bolted. I commenced to cut the third week in April (a little later than usual), but taking the winter into account, not a bad record. Mein's No. 1 is also very similar, but with me Ellam's turns in first. It has the same good qualities as regards hardiness and freedom from running, and on heavy clay land, I think is superior to Ellam's, being stronger. Veitch's Matchless is another good early form, with small leaves and compact growth, somewhat like Mein's No. 1, but broader, not so conical, most desirable for autumn sowing, and of delicate flavour. The above varieties may be relied upon in all soils and localities. Mein's No. 1 should be grown in exposed positions or in wet clayey soil. For light land Ellam's is the most reliable if well treated and sown at the proper date, with plenty of room for the plants to develop.

SOWING

is an important detail, but, as previously stated, is ruled by the locality. I sow on July 10 and 20. The reason for two sowings is that if the plants from the former are too large, those from the second are mostly planted. Generally the first sowing is a small one; only a limited number is planted and the plants are treated differently. They are planted in deeply-dug, heavily-manured land, and in a mild season are fit to cut early in March, but if otherwise, such plants suffer severely and are little earlier than those from the chief sowing ten days later. The plants sown at the later date are planted in large quantities and mostly on hard land. Drills are drawn in the ground just cleared of the Onion crop, no digging or forking being done, and the growth is hard, sturdy, and able to resist frost. There are no losses, and though growth may not be so luxuriant in the autumn, the plants are not injured so much and start away freely as the days lengthen. It may be asked, why make two sowings if the later is so superior? But should the winter be favourable there are two strings to one's bow. Kales and Brussels Sprouts run so soon in the early spring, that the first-sown Cabbages are most valuable, and if a fortnight earlier than others, worth the little trouble. Thin sowing should be practised, and a large bed for the seeds is necessary. A flat surface in the open should be prepared, giving ample moisture before and after sowing in dry weather. I also advise sowing broadcast, well covering the seeds with soil, in light soil treading the beds before sowing to give a firm root hold. Early planting is advisable, not allowing the plants to get large. Should the ground not be ready to plant it is better to prick off into lines for a time, lifting into the permanent quarters later on, and planting with a trowel. Assistance may be given in the way of protecting the stems. My plan is to well firm the plants early in December by treading down each side of the row, afterwards moulding up well. This preserves the stem and protects from east winds, so injurious after frost. It is advantageous to feed early in the year in mild, showery weather with guano or liquid manure.

G. WYTHES.

Late French Beans.—It frequently happens that runner Beans are cut down by an early frost even in September, and if a few plants of a dwarf kind are grown specially for late dishes, they may be given protection. I have grown both the runner and dwarf varieties for this purpose, but the dwarfs are the best for the latest supplies. If the runners are grown they require to be topped at 15 inches from the soil and to be sown in rows, so that they may readily be covered. The new climbing French Bean is well adapted for late use if stopped, as it produces so freely and is of excellent quality. For late sowing Ne Plus Ultra and the larger Canadian Wonder are the most productive; the latter variety, if given a few sticks to support the tops, may be readily covered with canvas or mats. Many shifts can be made to have a late supply. It is not necessary to grow under walls unless frames or span-lights can be afforded to cover the crop. I find that by sowing in the open on a raised border the plants dry sooner in dull weather and frost is not so injurious. I have for years sown this crop after the first early Potatoes, and a fine return the plants give. Whatever position is afforded them the ground

should be well worked, as a good root-run is essential. If the soil is dry it is well to draw the drills and saturate the soil before sowing, also repeating the watering after the seed is covered, thinning out early, and not crowding in any way.—G. W. S.

Pits and frames.—These where used for growing early vegetables should now be cleared of all Pea haulm and other refuse, the soil turned up so as to admit plenty of sun and air and to receive the rains so as to be in a fit state for Endive, Lettuce, Cauliflower and other similar subjects in autumn for winter protection.—J. Crawford.

CLUB IN CABBAGES.

Is there a fertiliser with which Cabbages, &c., might be watered two or three times a week as a preventive to the club? Do you consider that watering in the hot weather would increase the growth of the plants and be a check to this pest?—E. T. H.

*** Root disease would appear to be more prevalent than usual this season, and the blanks created among breadths of Cauliflowers, Cabbages, and such like are very annoying. Where trouble in this direction has previously been experienced, preventive measures ought always to be taken. In many instances the roots of plants in the seed beds will have commenced clubbing before they are large enough to put out. Sometimes it is caused by the grub of a small beetle or weevil, and occasionally the maggot of a midge or fly is responsible for the mischief. A free use of soot and lime, forking it into the surface of the bed before sowing the seed, has a deterrent effect, and so also has sand soaked in petroleum, the surface of the bed being dressed with this every week or ten days. Before planting examine the underground portion of stem of each plant, and cleanly cut away every small excrescence or wart there found, following this up with the old-fashioned remedy of puddling the roots of all the plants. Form a puddle with clay, soot, lime and water, a wineglassful of petroleum being also added with advantage, and drag the roots through this so as to thoroughly coat them and the lower portion of the stems with the puddle. Thus treated, they seem to feel the check of removal less than when not puddled, and are seldom interfered with by either maggots or wireworms afterwards. It is on stale, indifferently cultivated ground that grubs most often gain the ascendancy, and "E. T. H." will do well to do all he can towards promoting a vigorous growth of plants by way of prevention of club root. Newly-slaked lime at the rate of one bushel per rod ought to be forked into the surface of the previously well-manured ground, and after the plants have been put out, all being carefully fixed, clear water should be given for a time, or for the first week or so, afterwards giving liquid manure frequently. Nitrate of soda or that in mixture with superphosphate of lime, dissolved at the rate of one ounce to a gallon of water, would be the best form of fertiliser for the purpose. Apply at first round the plants, but when the latter are growing strongly draw mould up to the stems and pour the liquid manure freely along the furrows. Petroleum is one of the best insecticides ever discovered, and in extreme cases of club root I would advise soaking sand in it and mixing the latter freely with the soil in which the Cabbages are planted.—W. I.

Defoliating Tomatoes. — Mr. Iggulden's notes on this subject bring vividly to my mind an incident that occurred in an Essex garden some years ago. Tomato growing on open walls was more safe and profitable then than now, and in the garden in question the crop on plants growing between the Peach trees on a south wall was very heavy; the foliage also was very dense, and in order to expose the fruit somewhat to the action of the sun, the gardener instructed one of his men to go over the plants and remove a leaf here and there and to shorten others. Instead of this, however, he all but entirely defoliated the plants, to the great annoyance of the gardener. In the course of a few days a neighbouring gardener came over, and on seeing what had been done said nothing, but went home and gave orders for his plants to be similarly treated. Shortly after this the first named gardener paid him a visit, and on his expressing surprise at the way the plants were mutilated was met with the reply, "When I was in your garden a few days ago I saw yours had been similarly treated, and I thought that as you were a good gardener the practice must be right." The occurrence afforded a little amusement at the time, but it is almost needless to say that neither of the crops of Tomatoes was in the end satisfactory either in point of weight or quality. I quite agree with Mr. Iggulden that under certain circumstances a partial thinning out and shortening of leaves are necessary, but that excess in the matter does more harm than good.—J. Crawford.

—— I quite agree with W. Iggulden respecting the bad habit of defoliating Tomato plants; I have always considered it a barbarous method. I also quite agree as to the fault of planting too closely, which is a common error. Some three years since I had 7000 plants under glass, and although some of the foliage was shortened and the side-growths pinched off, I never allowed the plants to be cut up into scarecrows; indeed, at some places where they are planted 1 foot apart each way scarcely a leaf is to be seen.—Edw. Bennett, *Jyne, Chertsey.*

Tomatoes for Christmas.—By sowing a few seeds now there is no difficulty in having a good supply and of fair quality at Christmas. A pan of seed should be sown now in a warm house, and when the seedlings are well above the soil removed to a close frame, potted off into small pots and grown near the light, potting again into 6-inch pots when large enough. Expose during the night and merely shade during the hottest parts of the day after repotting. These will make strong plants fit to place in pots two or three sizes larger by the end of August. Stand the plants on a hard bottom fully exposed and keep all lateral growths removed. Plants grown thus will set fruit all up the stem by early October. If placed in a warm house with a free circulation of air, and well fed, the fruit will soon swell and give a good supply through November and December. In sowing for this crop I have found none to equal Conference and Conqueror.—S. H. B.

Tomatoes not setting.—My experience is that, as a rule, the corrugated varieties of Tomatoes set better than the smooth ones. There are, however, exceptions to this rule, as in the case of Ladybird and Webb's Regina; both of these comparatively new sorts set most freely, and that, too, on the bottom clusters of bloom. Both of these Tomatoes are of medium size only, but most useful for private gardens, especially where the fruit is eaten in a raw state. Of the ribbed varieties I do not think there is a better than the old dwarf Orangefield when obtained true. Certainly there is no better cropper or better flavoured sort, but we seldom meet with it now-a-days, its ungainly shape, I suppose, telling against it.—J. C.

Marrows in the open.—In forward localities these will now be in free growth and showing fruit. Where, however, a supply is being had from frame plants it will be advisable to ease the open air plants for a little while thereby strengthening them for future work. If the plants are healthy and fairly vigorous, do not be induced to feed too liberally, as should the weather turn humid and sunless with cold nights disease will be likely to lay hold of them. The old-fashioned plan of growing Marrows on manure heaps is fast dying out, and rightly so, as the system had nothing to recommend it. A gross sappy growth often results, and if the summer is extra hot some good Marrows may be cut, but in opposite seasons a fruit here and there is the general rule, the majority of blooms fail to set at all or the fruit turns yellow in quite a young state. Younger batches of plants must be encouraged to grow freely by plenty of root moisture and a good mulch of short litter. The longer the plants can be kept in a fruitless condition, provided they are not rampant, the better, as they will then be in good form for following the first lot and keeping up the supply until cut down by frost.—C.

JUNE IN SOUTH DEVON.

The mean average temperature of the past month has been 57·8°, or 1·7° below the mean average for the last sixteen years, but exactly the same as that for the much duller month of June, 1894. On five days the thermometer on the grass fell below 40·5°, the lowest reading being 39° on the 16th and 20th, the highest reading in the screen being 78·0° on the 24th.

The rainfall for the month has amounted to ·98 of an inch against 2·56 inches last year, and an average for sixteen years of 2·38, the total amount registered since January 1 reaching 11·76 inches against 14·96 inches in 1894. Sunshine, 273·5 hours, has been considerably above the average, which is 225·5 hours, and still further above that registered during the corresponding month of 1894, which amounted to but 184·3 hours, though in June, 1893, the sun shone for 293·65 hours, thus exceeding by over 20 hours the past month's record. The wind throughout the month has been light and variable, a very different state of affairs from June, 1894, which was phenomenally windy. The midsummer month is prodigal in the matter of flowers, Lilies, Irises, herbaceous perennials and annuals vieing with each other in their profusion of bloom. The first June Lily has been L. davuricum, the erect flowers of a clump of twenty bulbs forming a patch of orange-scarlet and following hard on the May-blooming L. pyrenaicum. Then came in order the slender-stemmed L. tenuifolium, its blooms spots of vivid red in the shaded Lily bed; L. Martagon with its dull purple Turk's-caps and the lovely white variety (L. M. album); then L. croceum, its strong 4-feet high flower-stems shooting up through the foliage of herbaceous Pæonies; and lastly, L. pardalinum, one bulb of which more precocious than its fellows produced its blossoms during June. Many other Lilies are to come, the tallest, L. giganteum, already 9 feet in height and 10 inches in circumference of stalk at the ground level, missing by a few days being classed among the June flowerers. Irises of the Spanish and English sections planted in large clumps of decided colours have made a brilliant display. Care should be taken to procure good named varieties at the outset and to keep them separate, the effect of a group of mixed tints being patchy and unsatisfactory compared with the breadth of colour obtained if the varieties are kept distinct. Of Spanish Irises, Golden King is a fine orange; Yellow King and Canary Bird, seemingly synonymous, are good light yellows; Snow Queen the most satisfactory white that I have tried, and Celestial, a pretty light blue. Of English Irises, the common blue and the white Mont Blanc or La Grandesse, both being equally good, make a perfect contrast. Spanish Irises should have a lighter soil than is necessary for their English relatives, which do well here in heavy loam.

I. Kæmpferi—since I was aided by "C. J.'s" note (p. 521, vol. xlvi.) to the effect that it should be grown in leaf-mould and well-rotted manure—has done grandly, the large clump flowering superbly during the past month. Iris ochroleuca, I. aurea and I. Monnieri, planted close to a little streamlet, opened the first blooms during the last week of June, their tall flanged leaves and flower-spikes rising through an undergrowth of Spiræa japonica and S. filipendula, both at the perfection of their feathery inflorescence. In another portion of the garden a large plant of S. aruncus, nearly 6 feet high, has been a mass of flower, and S. ariæfolia will be in full bloom by the end of the present week.

The double white Rockets have flowered throughout the month, and Gladiolus Colvillei The Bride with G. insignis have borne their white

and red spikes in close proximity, The Bride being a few days the earlier of the two. Masses of pure white Antirrhinum grouped with scarlet Lychnis chalcedonica have also been very effective, and, associated with low-growing subjects such as Phacelia campanularia, Œnothera Youngi, Agathæa cœlestis and Tradescantia virginica, which flower at a like time, save the borders from the appearance of formality that is unavoidable when the occupants are all of similar height. Here and there irregular patches of Alstrœmerias have mingled their delicate gradation of tints with the white of the double Campanula persicifolia and of the border Pinks. Campanula grandis and its white variety, with C. latifolia, light blue Delphiniums and white Foxgloves lifted their spires of bloom above the clumps of autumn-flowering perennial Sunflowers, herbaceous Phloxes and Michaelmas Daisies. The June sunshine hastened the display of the Canterbury Bells (purple, white and pink), Coreopsis lanceolata and scarlet Zinnias in the open beds; while in cool, shady spots the white Violas, Forget-me-nots and hybrid Aquilegias still continued to flower in scarcely diminished loveliness; and in a damp depression of the ground, close to the water's edge, Mimulus variegatus sent up a thicket of stems fully 2 feet high, crowned with a wealth of showy golden and blood-red blossoms. The large fringed orange blooms of Inula glandulosa expanded in unwonted profusion, and the creamy heads of Thalictrum aquilegifolium, composed of countless flowers individually inconspicuous, attracted at noontide an even larger host than usual of bees. The last of the herbaceous Pæonies—Leonie, a white, shading into delicate blush—has been one of the most beautiful, and the flowers of Canna Ehmanni iridiflora, though perhaps not possessing quite the brilliance of tint attained in the new dwarf race, added a striking note of colour but seldom met with in the garden. This Canna, which flowers until cut by the autumn frosts, when well grown will often reach a height of 6 feet, and produce leaves that are almost as handsome as those of the Musas. Over a pergola, fashioned from rough Larch poles, a white Jasmine has wreathed the leaves and tendrils of the Vines with which it is covered with white odorous clusters of blossom. At the base of a support by which one of the Vines is planted, an Ivy-leaved Geranium, Souvenir de Charles Turner, in a grey-green old Lucca oil jar, has perfected quite a quantity of large brilliant-tinted trusses that show up well against the celadon of the jar and the tender green of the climbing Vine.

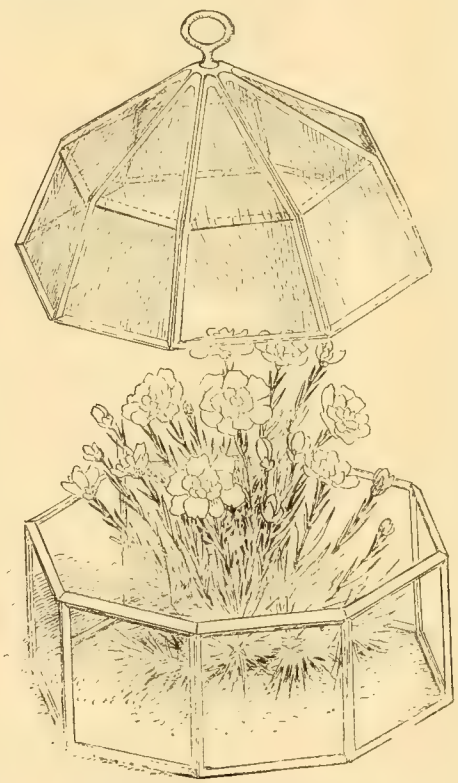
Roses have been most beautiful, but very short-lived, basketfuls cut each morning, to be succeeded ere evening by another flower harvest. Teas and Hybrid Teas are the favourites here, Viscountess Folkestone with shell-pink, loosely folded petals being considered to bear the palm as a decorative variety, but where all are exquisite, judgment is as difficult as was that of Paris, and, swayed by no temptation to be unduly partial, the guerdon—"For the most beautiful"—remains unawarded. The Austrian Copper and yellow Briers, Harrisoni and Persian Yellow, when planted thickly are most effective, a hedge of the different varieties which separates the flower from the kitchen garden having been a marvellous revelation of vivid colouring. Before leaving the subject of Roses I must admit to having been sadly disappointed by Crimson Rambler. It may be effective at a distance, but to my mind it is over-rated. I am aware that in this opinion I shall, judging by the flourish of trumpets with which this Rose was received, be at variance with the majority, and that by my confession I lay myself open to the reproach of being a person of bad taste, but this knowledge does not shake my conviction.

The Weigelas and Syringas have blossomed well, a tall bush of the latter large-flowered Philadelphus 10 feet in height, with graceful sprays smothered in starry cups, and its beauty enhanced by the green background of the shrubbery at the edge of which it stood, seeming in its white array the very bride of June.

Despite the drought of the last two months, the young Apple trees are looking remarkably healthy and making satisfactory growth, the foliage being dark green and very free from blight and insect pests. S. W. F.

HANDLIGHTS.

THE accompanying illustration shows a very nice handlight which was once made and perhaps put into the hands of dealers and nurserymen, but of that I cannot be sure. It was made, I believe, under Sir Joseph Paxton, for Chatsworth, and, besides Chiswick House, it is the only other place where I have seen it. The bars are extremely light for cast iron, not more than one-eighth of an inch thick anywhere, and it has features which ought to be recorded as suggestions to others interested. The most noticeable of these is a peculiar way of chamfering or sloping upwards the top of the body



A useful handlight. From a drawing by Mr. A. Dawson.

section with a corresponding internal chamfer on the lower edge of the top piece. This is repeated also on the lower edge of the body, and as a consequence it is easy to pile up these bodies two or three stories high before adding the top piece.

Suppose you wish for seed from a fine Pink or other plant. By having one or more of the body sections either partly glazed or without glass, then all the needful air will pass through and the flowers will be kept dry and produce seed, as I can testify.

I think for packing, two modifications would greatly improve them. In the cover I should do away with the handle and put a hole for the finger instead. This hole is always useful to let steam out; the lights can then be packed like cloches. The body portion may be advantageously divided into two opposite angles with tabs to join them. They will then pack into each other. The tabs or clips should be outside, or they will break the glass on being nested. They ought also to be made of ordinary brass, although the rigidity of the cast iron is a help when a crack occurs, for it is yet stiff enough to stand. D.

CHRYSANTHEMUMS.

SEASONABLE NOTES ON CULTURE.

THE present is a busy time amongst Chrysanthemums, as they are growing fast and require much attention. Plants grown with a limited number of stems, with the idea of producing large blooms, are generally looking well this season, having made, so far, vigorous growth, furnished with abundance of thick, fleshy leaves. Owing to their extra vigour, numerous side shoots are being pushed from the axils of the leaves; these should be promptly removed, as they are quite superfluous and rob the main branches of that support they ought to be storing up for developing the future blooms. Towards the end of the month some of the most difficult of varieties to manage will be showing a flower-bud at the point of growth. Mrs. Alpheus Hardy is one that is seldom seen in really good condition. Buds formed at the period named develop into satisfactory flowers. Instead, then, of removing the buds with the object of inducing fresh growth to be made, the shoots that cluster about the already formed buds should be pinched off to induce the buds to swell freely and well. Many varieties, like the Queen of England section, for example, are now forming buds. By pinching them out and restricting the number of shoots still to three on each plant, these same shoots will set flower-buds again at the end of August, the same developing into desirable blooms. With the present growth so promising, it is not necessary to give manurial stimulants at present. Clear water, with a weekly dose of soot water, will provide all that is necessary for another three weeks at least. As in all cases there may be exceptions, as, for instance, plants growing in extra small pots and that have been potted sufficiently long to have exhausted all the manurial properties of the soil, in such a case weak applications of liquid manure would be an advantage. By this means plants are kept growing sturdily and receive no check. The plants require regular attention in watering. They should be examined at least twice daily; dryness at the roots for any length of time means a loss of the lower leaves at a time when the plants can least spare them—I mean when the buds are swelling during September and the early part of October. In all cases rain or soft water is best; that coming from water companies' pipes or wells should be warmed by exposure in tubs. Syringe the plants daily during hot and dry weather in the evening and also early in the morning, when night dews are scarce, to create a humidity in the atmosphere about the plants.

The Celery fly (Zephritis onopordinis) is and has been very troublesome of late to the leaves of the plants. The maggot can easily be seen under the skin of the leaves where it secretes itself and quickly destroys the tissues, giving a serious check to the plants. Hand-picking persistently followed is the only efficacious remedy I know. Either squeeze the part of the leaf where the maggots are seen or pick them out with the point of a knife. Earwigs are beginning to be troublesome this season. The usual trap of Broad Bean stems or pieces of cane cut into lengths of 1 foot thrust amongst the leaves of the plants, and occasionally ex-

amined, will rid the plants of many of these pests.

Mildew, too, is making an early appearance on the lower leaves, especially where the plants have been given cold water during the recent hot and dry weather. Dust flowers of sulphur upon the parts affected at once; neglect of this may prove troublesome afterwards, as it is not easy to cleanse the plants of this parasite when once they are attacked on the underneath part of the leaves.

Plants intended for specimens should have their shoots topped for the last time to induce them to push forth additional growths until they make their natural break in September. Keep the branches secure from breakage by wind or other causes by securing the shoots loosely to stakes of a temporary character. Abundance of space between each is a desirable detail of culture. To have them standing thickly together, each robbing its neighbour of air and light, is not the way to ensure success; ample light and air ought at all times to be provided.

E. Molyneux.

CHRYSANTHEMUM NOTES.

A hot, dry season suits the growth of the Chrysanthemum by hardening the leaves and wood, thus forming the foundation of a like solidity in the blossoms, as well as enhancing their colours. Such weather as we are now having means a large amount of routine work, like watering, which, however, must be done if success is to follow. It is found needful to examine the whole collection quite three times daily, for such thoughtless practices as giving water all round will not do in the case of the Chrysanthemum. This is a gross-feeding plant, but the growth is as likely to be crippled by soddening the earth as it is by allowing the latter to become dry. In each instance the roots suffer.

Where care and thought have been exercised the plants are looking exceedingly well, though a trifle more yellow in the leaves than in some seasons. This may perhaps be expected, as nothing in the way of liquid manures has yet been thought of. I have noted cases where the leaves have assumed a sickly yellow hue and the bottom ones have decayed, a far different matter, and caused by the too free use of fertilisers at the time of final potting. Rational modes of culture are always advisable. The idea that if an ounce of some strong concentrated manure is beneficial, double or treble the quantity must be more so, has not yet left growers of plants. Some, too, will start giving liquid manure almost before the roots have obtained a hold of the new soil, to the detriment of healthy growth. A matter that will very soon engage attention is

Bud taking,

that is, selecting the buds which are to remain on the plant. It is orthodox not to retain a bud on any of the autumn kinds during July, but those who cultivate the Chrysanthemum for large blooms cannot be guided by general rules. Individual varieties must be studied. Thus we find that W. G. Hewitt, The Queen, and a few other Japanese sorts are so late in bud-formation, that it may be advisable to select the one bloom-bud on the single stem and be satisfied with that number to a plant, and in the case of the well-known sort E. Molyneux, we have a choice of evils. The variety may be said to be handsome "when caught right." Generally it is most unsatisfactory from a late bud, and from an early one the colour is poor. But I would rather secure buds towards the end of July and obtain blooms of the latter character than run the risk of getting flowers with one or two outer rows of petals and a large yellow eye. Sunflower, again, owes not a little of its popularity because of the gracefully drooping habit of its florets. To obtain this desirable form buds must be selected early, and even as early as the end of July I have found a better time than allowing the plants to make other growths upwards and taking the buds about five weeks later, a period which would not give a variety requiring a long time for development sufficient to bring out the proper characters. The ways of most of the older kinds, however, should now be pretty well known, and I will note a few of the more popular of recent introductions. The handsome light yellow Duchess of York is a variety that must have a long period for bud development, and should, therefore, be "taken" early. M. Panckoucke has a long drooping blossom and requires early bud selection for show purposes. L'Isere and Mme. Carnot, on the other hand, are not satisfactory from early buds. In the case of these fine white sorts the second bud from the first natural break is a good one to select. The fine white Niveum, unfortunately, has this season a habit of giving premature buds, but from early selected ones the sort does not develop pleasing blooms. Commandant Blusset should be allowed ample time to perfect its blooms. This sort, then, may be manipulated early. Louise is an early sort. Personally, I do not care for it when from late buds; its colour has a sickly look and is far more pleasing in its blush white tint obtained from early buds. Souvenir de Petite Amie is not satisfactory from late buds. Wilfred Marshall must have a long time for development, and President Borel comes best from late buds. Golden Gate, a fine late variety, is not obtainable in early autumn by forward bud selection. This, as well as Miss Dorothea Shea, comes of bad shape and faulty colour by adopting the plan. Mrs. W. H. Lees gives flowers with drooping florets, but I think the most desirable ones are had when the buds are taken early. Eda Prass is a very fine variety and the buds take an unusually long time to fully extend. Rose Wynne is the prettier, if not so huge in size, from buds formed late. R. Dean, again, is of the Mrs. Falconer Jameson type, requiring, therefore, early bud selection. Miss M. Blenkiron is of a similar habit. M. Ch. Molin should come from early crown buds, or it is small for show purposes, and a like remark applies to Mrs. E. G. Hill. It is hardly necessary to extend the list of Japanese sorts, as examples of most of the types have been given. Early formed flower-buds will in the case of most sorts give the larger flowers, and late ones the better coloured. For instance, Viviand Morel produces blooms of a dirty white from early buds to a satiny mauve from late ones, and the true character of many a sort is lost by not paying the necessary attention to this phase of Chrysanthemum culture. Varieties of American origin will generally be found to require longer for bloom development than do the sorts from France.

Incurved varieties may be dealt with more easily. The group known as the Princess family, including Mrs. Heal, Mrs. S. Coleman, Miss M. A. Haggas, Violet Tomlin, and Lucy Kendall must be dealt with in July. This time, however, is too early for all of the other well-known kinds. The new white sort, J. Agate, requires early bud formation, that is the crown bud should be taken. The same with the neat Globe d'Or. Robert Petfield, at the best uncertain, should be left somewhat late. The period likely to suit other classes of Chrysanthemums, such as the Anemone-flowered, pompon, and single, is early September. At this time the terminal buds are prevalent, the last formed being the more sure in bringing out the true characters of the types mentioned.

H. S.

SHIPPING CHRYSANTHEMUMS.

Under the heading, "The Past Season," Mr. Michael Barker draws attention in the "American Chrysanthemum Annual" to a point of vast importance to all foreign raisers and growers of new Chrysanthemums. He says:—

There has been much complaint about the despatch of new varieties from America so late in the season, that nothing of value can be done with them in foreign countries until the following year. This means serious disappointment to the purchaser, and ultimately perhaps a great loss to the distributor.

No one without some knowledge of the English method of cultivation can properly estimate the importance of this complaint. Time after time when ordering plants for friends who have desired something new and novel from abroad have I impressed upon the growers the absolute necessity of despatching the plants in February or March, so that they can be treated in such a way as to bloom in proper form the following autumn, yet in a great many cases this request has been ignored, and small rooted cuttings have perhaps arrived in the month of June when the purchaser's collection is finally potted up into the flowering pots, and consists of strong growing plants that cannot be overtaken by the new-comers.

The practical result of this is that these new varieties stand no chance when autumn comes. There is such a multitude of new seedlings grown every year by English importers, that it is only those that succeed fairly well the first year that find a place at our floral meetings and at the trade displays. The late arrivals are all behind and, of course, may do well the following year, but time is valuable in these days of keen competition, and space cannot always be spared two years in succession for the same novelty. Hence the plants that are sent over late have to make way for the following season's novelties, and unless they find their way into the hands of a small private grower of considerable ability are seldom or never seen or heard of again.

It is, therefore, of the highest importance if a foreign raiser wishes his seedlings to compete on fair terms with those of other growers to make it a fixed rule that his novelties shall be propagated and ready for distribution by February or March at the latest. It would be easy to mention the names of several raisers who entirely disregard this plan. The result is that their names are but little known here and the majority of their flowers still less so.

One would think that one of the essentials in commerce would be to ascertain the peculiar needs of one's customers and provide accordingly. Without some such adherence to business principles foreign raisers must not expect to rank high in our estimation, nor should they complain that their seedlings are not so good as those of other growers when they themselves have been the cause of their flowers not having the chance of being properly tested.

C. H. P.

New Zealand seedlings.—Most readers of The Garden will remember the despatch by Mr. John Earland of some colonial-raised seedlings, which were exhibited at an early flower show of the National Chrysanthemum Society a few years ago. From a report of the Wellington Chrysanthemum show held last April I gather that the work of seedling-raising is still going on, and some novelties were staged, to which the

judges made special awards. The names of the new seedlings are not given in the report, but the principal growers appear to be Mr. S. Bolton, of Nelson, Mr. John Earland, of Wellington, Mr. McLeod, of Napier, and Mr. F. Cooper.—C. H. P.

CHRYSANTHEMUMS IN NEW ZEALAND.

ONE of the most enthusiastic and successful colonial Chrysanthemum societies I know of is that at Cambridge, Waikato, N.Z. At their exhibition held in April last some very fine blooms were staged in the classes for thirty-six, half Japanese and half incurved, distinct varieties, and twenty-four Japanese distinct. The winning stand in the first-named class was set up by Mr. T. Wells, the chairman of the society, and four judges from Auckland, who examined his stand in the twenty-four class, and which was also awarded first prize, declared that it was the best twenty-four they had ever seen.

It may be interesting to record the names of those which had such a high encomium passed upon them, and from the report the following is quoted :—

They were staged as follows, reading from left to right. The figures denote diameter in inches, except Mrs. B. Findlay and Eda Prass Japanese incurved, in which the depth is also given. Back row : Mrs. Bruce Findlay 7½ by 7, Golden Wedding, Viviand Morel 10½, Mrs. Langtry, Miss Dorothy Shea 12½, Mlle. Thérèse Rey, Thunberg, Mrs. E. D. Adams 12. Middle row: Eda Prass 7 by 6, Viscountess Hambledon 8, Jennie Williams, Chas. Davis, The Queen, Harry May, Lucrece, Mrs. Libbie Allen. Front row: Grandiflorum, Beauty of Exmouth, R. C. Kingston, Bryden, jun., O. P. Bassett, Miss A. Hartshorn, Fred. Dorner, Florence Davis. Of the new varieties in this stand, Mlle. Thérèse Rey unquestionably comes first, and fully maintains its English reputation of being "the finest white in existence." The Queen is an American introduction. It is very large and handsome, and is the queen of American whites. Mrs. E. D. Adams as shown was the perfection of beauty, being white, suffused pink, with very long curling florets; Miss Dorothy Shea is a true Japanese with long (fully 6 inches) broad florets of terra-cotta colour; Viscountess Hambledon is a Japanese incurved, large and handsome, silvery pink. Of the new yellows, Mrs. Libbie Allen is the best of this season. Mrs. Bruce Findlay was a mammoth ball of a pink incurved Japanese, as high as broad, and solid enough to be tossed across a room.

In several other classes the names of the flowers are given, which show that the New Zealand growers are keenly alive to the necessity of keeping pace with the times and importing all the newest and best European and American novelties as soon as it is possible to procure them.

There were forty-two classes provided for in the schedule, all of which were well filled, there being in some cases ten, twelve, and even fourteen entries. A gratifying feature of the Cambridge show is the competition for school children consisting of bouquets and floral designs. There were 381 entries in these classes alone.

CHRYSANTH.

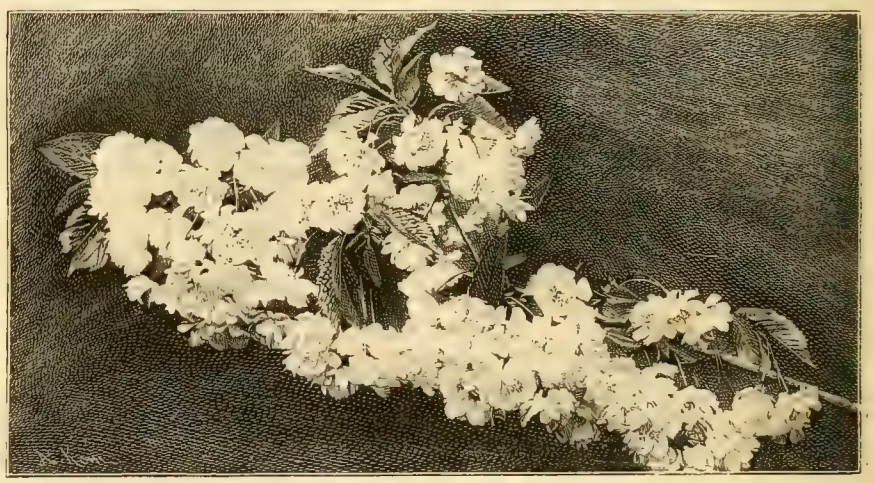
TREES AND SHRUBS.

DOUBLE-FLOWERED CHERRIES.

OF the numerous flowering trees and shrubs that adorn our gardens in spring and early summer, the double-flowered Cherry is one of the most valuable, for nothing could be more beautiful than the long snowy white wreaths with which the tree is crowded from top to bottom. There are two or three kinds, but the best is the one of which the accompanying is an illustration. The semi-double variety, although less beautiful, possesses the advantage of flowering earlier than the true double kind. No lawn ought to be without a tree of the double kind, and beautiful groups might be made by planting a selection of the double-flowered Peach and Almond, scarlet Hawthorn, Amelanchier, and Chinese and other Crab trees, all of which flower in spring and have a handsome habit of growth. Mr. Spooner, of Arthur's Bridge Nurseries, Woking, writing to us in reference to the illustration, says :—

The branch of the double-flowered Cherry is from a tree of a very fine variety growing in my nursery here. It is a great improvement on the old sort, being much more free in its growth and producing finer blossoms. At the time the photo was taken (May 6) the tree was a mass of pure white. For planting in borders, &c., it would be hard to beat, as it comes into bloom very early, when there are few other plants in flower.

Philadelphus microphyllus.—This delightful little Mock Orange—from which the hybrid P. Lemoinei, described a short time ago in THE GARDEN, derives so much of its charm—is now fully in flower with us. P. Lemoinei is just out of bloom, and this makes an admirable succession plant to it. Of dwarf, compact habit, and having thin wiry stems, with leaves half an inch long, it differs entirely from every other species of Philadelphus. Its small proportions and neat shape render it well adapted to a rock garden where small shrubby plants are admitted. A bed



The double-flowering Cherry. Engraved for THE GARDEN *from a photograph sent by Mr. W. Spooner, Arthur's Bridge Nurseries, Woking Station, Surrey.*

of it 10 feet across and rather thickly planted is now a mass of white flowers, whose delicious Pine-apple-like perfume is perceptible many yards away. It strikes freely enough, and there is no reason that it should remain an uncommon plant, except that its good qualities are not generally known. A glance at plate 824 (THE GARDEN, September 26, 1891), which in no way exaggerates the charms of this shrub, will perhaps be the most effective way of recommending it. Of its cultivation nothing need be said, except that it flowers most freely when grown in the sunniest possible positions and planted in deep, fairly rich loam. It is a native of New Mexico.—W. J. B.

Embothrium coccineum.—This has flowered most profusely here this season. Its beauty is just fading. I never saw it so brilliant as this year, showing how much it enjoyed the almost tropical heat and dry season we have had. It is a pity such an ornamental tree or shrub should be so difficult to establish, and when established kept in health for any length of time. When it has reached the height of 20 feet or 25 feet it generally dies without any apparent cause.—W. OSBORNE, *Fota*.

Spiræa Bumalda.—As the season advances and flowering shrubs become scarcer the value of this Spiræa is always appreciated. Commencing to flower about the beginning of July, it keeps on blossoming (if the old flower-heads are removed) until frosts set in. The variety sent out from the Knap Hill Nursery and called Anthony Waterer is the best of all the forms of Bumalda, and as it is just as easily grown and propagated as the ordinary form, it should have the preference. The flowers are borne at the ends of the branches in dense, flat corymbs, about 4 inches across, the colour in the typical variety being carmine, which in the variety A. Waterer deepens into a much more crimson shade with nearly all the purple eliminated. Both this and the type produce variegated leaves—a whole branch sometimes having all its leaves white—even if struck from the greenest shoots, so the so-called var. variegata sometimes offered for sale may be passed over. S. Bumalda is a native of Japan, and belongs to the japonica set, to which also the plants known as callosa and ruberrima belong. All of them are of neat, dwarf habit and thrive in any fairly rich soil.—B.

Pterocarya caucasica.—In answer to the query on page 448 as to whether the above tree is growing in the immediate neighbourhood of water I must reply most decidedly in the negative. It has always seemed strange that this particular specimen (probably the largest in England) should flourish in so wonderful a manner high and dry in our light soil when, as Mr. Wythes says, its native habitat is in the moist valleys that are found between the Caucasian range. A friend who visited me the other day said he had seen the tree frequently in France, but individual specimens were not more than half the size of this tree. It wants cutting back some 10 feet or 12 feet on three sides out of four, but I cannot as yet muster up courage to touch it with knife or saw.—E. BURRELL.

Genista virgata.—This is one of the finest Brooms in cultivation, and it is somewhat singular if it be a native of Madeira that it should be so little injured by the severe weather experienced during the early part of the present year. My reason for suggesting any doubt as to its native country is that there have been so many conflicting accounts of this particular Broom, that one additional error may easily creep in. At Kew it was grown for many years under the name of Genista elata, but it is now changed to G. virgata. Then, referring to the "Dictionary of Gardening," matters are still further complicated, for there G. virgata is said to reach a height of 3 feet to 4 feet, while at the time that work was compiled the large bushes at Kew would be in some cases at least nearly 12 feet high. Clearly two separate plants are here intended. It should be easy to prove if this Genista is really a native of Madeira, for the manner in which it passed through the last winter raises a certain amount of doubt, more especially

when the conflicting character of its nomenclature is taken into consideration.—H. P.

Spiræa ariæfolia.—This beautiful shrubby Spiræa is now lovely. A tall bush covered with white panicles of bloom, some with the minute flowers fully expanded hanging in downy plumes, some on the point of opening their blossoms, is charming. An isolated position should, if possible, be chosen for this Spiræa, that its graceful form may be seen to the best advantage. Too often it is relegated to the shrubbery, where, though it exists, it is shorn of half its beauty. It is not particular as to soil, but grows to the greatest size and perfection in damp situations. It is easily propagated by division of the roots, and when once established increases in size rapidly.—S. W. F.

Erica ciliaris alba.—The plant referred to by "E." under the above name in The Garden of June 29 (p. 458) must surely be wrongly named, and I should imagine it either a white variety of E. cinerea or E. tetralix. Erica ciliaris is a late flowering and very handsome hardy Heath, by no means common in gardens, and, so far as I am aware, there is no white variety of it in cultivation, although a white form would be a most desirable plant. The fact that the plant alluded to was in profuse bloom points to its being something else, as E. ciliaris if in flower at all would not have many blooms out so early.—H.

Azalea occidentalis.—The chief value of this species consists in its flowering later than the ordinary Ghent Azaleas, thus lengthening the Azalea season by several weeks. Compared with some of the best of the earlier flowering sorts—whose tints, however, can scarcely be rivalled among outdoor shrubs either in softness or brilliancy—it cannot be described as showy. The flowers are, nevertheless, produced abundantly and in good-sized trusses; each bloom about 2 inches in diameter and, with the exception of a pale yellow blotch on one petal, pure white. Their sweet fragrance adds not a little to their charm. The species has already been taken in hand by Mr. Anthony Waterer, of Knap Hill, with a view to the production of a race of Azaleas which shall at once extend the season of these shrubs and possess some of the delightful colouring of the earlier flowering varieties. Judging by the specimens he has already exhibited, we may confidently expect a large measure of success.—B.

Stove and Greenhouse.

TILLANDSIA DURATI.

This Tillandsia (one of the finest, if not the finest, of the southern Bromeliads) is one of the few species of the genus which have sweet-scented flowers. Nearly all the plants of this family are scentless. In tropical regions the only species, perhaps, which is known to have scented flowers is Tillandsia fragrans. This species, which has fragrant white flowers, I have collected in Ecuador, where it is found growing at an altitude of 2500 mètres. On the other hand, some of the species found in La Plata, such as Tillandsia Durati, T. xiphioides, &c., have deliciously scented flowers, and it would appear as if the perfume was a kind of compensation bestowed upon those species which cannot boast of handsome foliage, striking stature, or brilliant bracts and flowers. These poorer forms of a family which in Brazil, on the Andes, in the Antilles, and in Mexico is so richly endowed by Nature, nevertheless present special attractions. In the first place, wherever they are found growing they are generally very abundant. Tillandsia (Anoplophytum) stricta, T. microxiphion and allied forms cover the branches of trees to their smallest twigs, and the effect of their diminutive rosettes of reddish and olive-green leaves is enhanced by the brilliant setting-off of their bright pink bracts and blue flowers. T. xiphioides and T. Arequitæ carpet the rocks with their foliage and pretty white flowers, while T. ixioides and T. crocata are covered with flower-spikes of a fine yellow colour.

Frequently, also, their felt-grey or nearly white leaves, looking like a strip of cloth, are twisted like a cork-screw or like the main-spring of a watch, and, although less attractive, perhaps, in appearance, the numerous slender stems of T. usneoides, hanging like sails from the branches of trees, and the multitudinous dense tufts of T. recurvata impart to the landscape an element of picturesqueness of the highest order, the ashy-grey tint of their foliage serving to bring this out more effectively by contrast with the surrounding verdure.

With respect to their culture, for a long time every importation of these "Flowers of the Air" (*flores del aire*, as they are termed in La Plata) was a failure. Most of the plants scarcely grew at all, and those that did hardly ever flowered a second time. At the present day, by following a very simple mode of treatment, one may have these plants in bloom almost every year. All that is necessary is to fasten the plant with iron wire to a piece of wood or cork without any soil or Moss, and during winter to hang it up to the glass (near the ventilator) of a temperate house. In May the plants are to be brought out of doors and hung upon the branches of trees in the full sun. During the whole summer up to October (when they are to be brought back to the house) they require no watering. Having formed some aërial roots and also young shoots in the moist atmosphere of the house prior to their removal into the open air, the growth of the rosettes of leaves takes place under the friendly influence of the sun, whose warmest beams these plants never find insupportable.

In this way year after year I treat that part of my collection which includes Tillandsia Arequitæ, T. xiphioides, T. Unca, T. Myosura, T. dianthoidea, T. stricta, and T. microxiphion, the plants after they are taken back to the house coming into flower in the course of the winter, and continuing to bloom until spring. During the summer it is rather a curious sight to see the pieces of wood covered with rosettes of leaves, without any appearance of roots, suspended from the branches of Hibiscus syriacus growing in a flower-pot, the suspended plants receiving no water except what comes from the skies.

Tillandsia Durati, which flowered with me last year at Lacroix, is a native of Uruguay and the Argentine Republic. Found by the English botanist Tweedie in the same localities on the Salto, Uruguay, from which I brought it away with me in the year 1890, it had been previously found in Brazil by Auguste de Sainte-Hilaire, in Bolivia by Weddell, and in Southern Peru by C. Gay, Miers, and others. The species, however, is rather rare even in the wild state. The plant forms a more or less dense tuft of stems, which are sometimes short, but may be elongated, prostrate, or twisted. The leaves are linear-lanceolate, from 10 inches to 14 inches long, and are covered on both sides with small whitish scales. Flower-stem erect and rigid and from 1 foot to over 2 feet in height. Flowers of a pale mauve-violet colour with a white centre, and produced in longish panicles; they commence to bloom at the bottom of the panicle, and continue in a fresh and unfaded condition for several days, giving out a very pleasant penetrating odour, which suggests a combination of the scents of Stocks, Primroses, and Jasmine.

When the tufts are of pretty large dimensions (like one which I brought away with me in 1890, and which measured 2 feet 4 inches in diameter, with a dozen flowering stems), the plant becomes very ornamental, and when suspended in a plant-house presents an appearance which is both novel and attractive. The whole secret of getting it to bloom well is by treating it as I have described above.—Ed. André, in *Revue Horticole.*

Nerines (*F. L.*).—These should now be kept dry at the root, and until the flower spikes or growths appear. When the flower-spikes appear give water more freely. The Guernsey Lily proper (N. sarniensis) is about the first to come into flower, being followed by N. Fothergilli and its major variety.

Calla Elliottiana.—This we saw at Chelsea recently carrying fine rich yellow flowers, and strong crowns give them in succession in the same way as the old white kind, some of the plants having seed nearly ripe from early blooms and fine fresh flowers as well. The rich yellow colour is very showy and the leaves are prettily mottled with white. No doubt it will become popular when plentiful.

Streptocarpi.—A very good illustration of the long-flowering character of these is furnished by a batch we saw at Chelsea the other day. The plants were those that made such a fine display at the Temple show, and yet when we saw them they were still flowering as freely as in May, while crowds of buds were still to open. Having regard to the wide range of colour they now embrace, it is scarcely necessary to give them distinctive names and awards of merit, as has been done of late.

Gesnera longiflora.—In the spring of 1888 a coloured plate of this very distinct Gesnera was given in The Garden, at which time, though an old plant, it was but little known, and even now its merits are not sufficiently recognised, for it possesses many desirable qualities. It is an erect growing plant, reaching a height of a yard or more, the stem and branches being clothed with a kind of rusty tomentum. The greyish tinted ovate leaves are also hairy. The flowers, which are borne on the upper part of the stem, have a long narrow tube and a widely expanded mouth. They are of a pure white tint and agreeably scented. It is a native of New Grenada and succeeds best with intermediate house treatment. For grouping and similar purposes it is extremely useful, as the long slender stems often serve to break up any undue formality. It is a plant of easy culture, succeeding, like most of its class, in a rather light open soil, and while growing it is greatly benefited by occasional doses of liquid manure.—H. P.

Oxalis Bowieana.—Among the many members of this extensive and variable genus, one of the best—regarded from an ornamental point of view—is Oxalis Bowieana, which has the largest flowers of any of the stemless forms. It is a free-growing kind, with large trifoliate leaves and blossoms, each about 1½ inches in diameter. They are borne in loose umbels on a stem that reaches a height of 6 inches to 8 inches. The colour of the blossoms is an exceptionally bright rose-red. When grown in pots, or planted at the edge of a stage to form a margin thereto, as is done at Kew, this Oxalis, and, in fact, several other members of the genus, are very beautiful, as their loose style of growth just fits them for such a position. This species is a native of South Africa, and was introduced therefrom in 1824. The pretty little Chilian Oxalis lobata, with golden yellow flowers about the size of a shilling, only reaches a height of 4 inches or so, but it forms quite a mass of its brightly coloured blooms. A distinct species that, if treated as a greenhouse plant makes a goodly show during the spring months is Oxalis cernua, a tuberous-rooted kind, with trifoliate leaves and beautiful clear yellow flowers, each about three-quarters of an inch across. They are borne in a many-flowered umbel on a stout stalk that

reaches a height of from 6 inches to 8 inches or thereabouts. This is a native of the Cape of Good Hope, from whence it was introduced about the middle of the last century, but it is very rarely met with.—H. P.

Books.

A VAGABOND IN SPAIN.*

This is the record of a journey or foot from Burgos to Gibraltar, viâ Biarritz, Pamplona, Zaragoza, Valencia, Madrid, Toledo, Seville, Granada, and the Alhambra, &c. The object of M. Luffmann's journey, as set forth in his passport, was to obtain an insight into the conditions and methods of agriculture in the Iberian Peninsula in the parts traversed by him, for the purpose of giving an account of the same in a book or pamphlet. This being so, it is surprising and somewhat disappointing that only the most passing reference is made to agricultural matters in the entire three hundred and odd pages of which the book is composed. The author's impressions of the economic value of Spain are easily summed up—a poor country and a poor people. He says: "Ours is a struggle for existence," sadly observed an intelligent native in conversation with M. Luffmann; "we can never hope to advance. 'Our internal growth,' as you call it, is in proportion to our national resources, and what are they? Here for ages we have carried on the most intense system of cultivation, and we have exercised rigid economy. We have had few endemical disasters. Yet with all this we are just where we were centuries ago."

M. Luffmann went as a tramp (he did not act the character), and if he sometimes had a tramp's welcome, he found the natives, generally speaking, hospitable and kindly. "No one can complain of the Spaniard's lack of friendliness," he says, "if once they take to you. There is a peculiar hardness in the character of many Spaniards, but take them all round I believe them as humane as any other men." The Basque women impressed him favourably. If he has little to say about agriculture, he tells us a good deal about the churches—"the commonest objects in Spain, and yet not common." His remarks on this head, however, are like those of the average Briton who has been bred in the shadow of Exeter Hall. Thus, of the cathedral of Toledo he says it contains thousands of beautiful things, "but the collection is marred by the presence of incongruous and ridiculous gimcracks, just as if it were a museum or a bric a-brac shop. But in spite of faults of taste and flippancy of style, which are somewhat frequent, the book is not at all dull reading. One feels, however, that it is superficial. The Spanish knife, it seems, is a "bogey." The Spaniard is not quarrelsome, but he excels in the use of expletives. A bluff old colonel of engineers told the author frankly he knew nothing about Spain. "It is easy for you travelling penny-a-liners," he went on, "to say what we are and what we are not, but to what end and purpose do you prattle and complain? Let us be fair. We ask you for nothing. Do not rob us of what we have now—the greatest thing in the world." "What is that?" M. Luffmann asked. "Peace," answered the colonel. "We," the author goes on, "agreed that Spain was not worth fighting for, and that, being hard bound by natural conditions, she could never advance and keep pace with the rest of the world. Then, having pacified the old warrior by the adoption of all his opinions, I bade him good-night and went off to the Teatro Verano. I did not enjoy the performance, for the actors could neither play nor sing; but a Spanish crowd is always entertaining." In Ciudad-Real he met a reverend canon who "loved the English on account of the riches they have given to his library." This must have been a different stamp of ecclesiastic from the one whose library Gil Blas became the fortunate legatee of, as "Shakespeare, Milton, Bacon, and Ben Jonson were his intimate friends." He delighted also in Bulwer, Dickens, and Thackeray, and considered the Brontë sisters and George Eliot the greatest women of genius in the history of the world. But his idol, M. Luffmann adds, is Byron. After this who shall say that the Spanish clergy limit their reading to dusty theological tracts. It is laughable to think of a dignitary of the English establishment discussing books with a professional tramp. But Spain is still in many respects the country Le Sage described it. There are, it appears, 600 priests in Cordoba. Nevertheless, "Cordoba is bankrupt, nothing less; but it tries to keep its head up and indulge in light loves. It pays for big toros and keeps scores of cafés and gaming houses going, and the patrons of these resorts claim to be highly respectable and very much alive," and so on in the same strain the whole book. We could wish M. Luffmann had shown less of the tramp and more of the traveller in his pages. People with a taste for light literature will not be disappointed with "A Vagabond in Spain."

* "A Vagabond in Spain." By C. Bogue Luffmann. John Murray, Albemarle Street.

A HAND-BOOK TO THE GAME BIRDS.*

This is another of the useful series edited by Dr. Bowdler-Sharpe, and known as "Allen's Naturalist's Library," and in some respects the most interesting. Mr. Ogilvie-Grant's work in connection with the zoological department of the British Museum and his own wide reputation as an authority on game birds are guarantees of scientific accuracy. The author's aim has been to provide a useful hand-book for sportsmen in all parts of the world. The style of the book is clear and concise without sacrificing anything which gives breadth and local colour to descriptions of the birds in their native habitats. These descriptions are vivid and picturesque, and the personal experiences of men in search of game among the mountains of India, Thibet, of North America, Mexico and Borneo are pleasant to read. Among the sportsmen and naturalists who have contributed their experiences we note the names of Mr. A. O. Hume, C.B., author of the "Game Birds of India," of Captain Bendire, who wrote a "Life History of North American Birds," Mr. W. T. Blandford, Mr. J. G. Millais, Col. Legge, author of the "Birds of Ceylon," as well as of authorities like Heuglin, Abbé David, Baldwin, Wilson and others.

The present volume includes the sand grouse, willow grouse, ptarmigan, capercailzies, Canadian grouse, sharp-winged grouse, American capercailzies, pinnated grouse, other kinds of grouse (red-legged and others), snow cocks, quails (painted and others), the francolins, the tree partridges, the spur fowl, the stone, bamboo, blood, horned, Moonal, fireback, eared, wattled, Kalig and Kohlass pheasants.

* "A Hand-Book to the Game Birds." By W. R. Ogilvie-Grant. Vol. I. W. H. Allen and Co., Ltd., 13, Waterloo Place, S.W.

GARDENING A LA MODE.†

This little manual with its ridiculous title is intended for the use of amateurs, and gives the results of the author's own experiences. "When we came to live in the country," she says in the preface, "we were such cockneys, we knew absolutely nothing about gardening." In the present day, when so many people are alive to the improved use of garden vegetables, it was a good idea to include in a manual of this kind the best ways of cooking them. But, unfortunately, it is very imperfectly carried out in the present instance. Thus, to take one example, the Belgian way of cooking Brussels Sprouts is omitted, and the Brussels Sprouts which are mentioned as "the best" are the coarse English kinds, crossed with Cabbages and having nothing to do with the true Brussels Sprouts. Again, there is only one recipe given for cooking so important a vegetable as the Cauliflower. In the chapter on the cultivation of Mushrooms, the following passage (p. 67) relating to a patent system of cultivation by M. J. Nepp, of Leipsic, occurs: "*His beds are artificially prepared in such a way that indirect pulsation and aspiration are provided, and the growth stimulated by the chemical bed and the regulation of the temperature.*" This is one of the most absurd statements we have ever seen in a book.

However, as the book is not intended to be more than a manual for amateurs, it may answer its purpose well enough, so far as amateur cultivation of vegetables goes, provided they will take care to observe the motto of the book, which is *experientia docet.*

† "Gardening à la Mode." (Vegetables.) By Mrs. de Salis. Longmans, Green and Co.

Societies and Exhibitions.

THE LONDON PANSY AND VIOLET SOCIETY.

Everybody interested in these useful and popular flowers agreed that the exhibition held at the Crystal Palace on the 6th inst. was a very satisfactory and attractive one. It had been thought the dry weather would have affected it and that there would be but few flowers, but there were many. The northern growers came up bringing their superb fancy Pansies grown in the cooler and moister districts of Lancashire and Scotland, and the Violas in sprays were very numerous and extremely pretty. A considerable space of staging at the foot of the orchestra was quite filled.

In the open division there was but one collection of Pansies and Violas, but it was very fine and quite a show in itself. It came from Mr. S. Pye, Garstang, Preston, and consisted of twelve boards of fancy Pansies, each containing twenty-four blooms, and four large panels of Violas, each containing forty sprays. To Mr. Pye's great credit, be it stated, all the flowers were named. It was most deservedly awarded the gold medal of the society. The names of the leading varieties composing this fine exhibit will be found set forth in the following classes.

There were five exhibitors of forty-eight fancy Pansies, and here Mr. J. Sutherland, Lenzie, N.B., took the first prize with some finely developed blooms. Chief among them were Col. J. S. Stirling, Mrs. W. Watson, Miss Stirling, Maggie McPhail, Jas. Irvine, Miss Patterson, Tamworth Yellow, Mrs. Fleming, Mrs. Sherrard, Marmion, Geo. Stewart, W. H. Clark, Bernard Doulton, Mrs. M. Cuthbertson, Dr. G. McKay, Jessie Russell, Celtic Gem, Jenny Lawson, and Princess May. If any reader of The Garden wishes to have a choice selection he will find it in the foregoing. Mr. M. Campbell, Blantyre, was second, and Mr. John Smellie, Busby, N.B., third. With twenty-four varieties, Mr. A. Lister, Rothesay, was first. A few of his very finest varieties will be found in Col. R. G. Buchanan, B. Doulton, Tamworth Yellow, Edward Kellett, Miss Stirling, Mrs. W. Watson, William Watson, David Russell, and Mrs. D. Johnstone. Mr. J. Smellie was second, and Messrs. Paul and Co., Bridge of Weir, third. With twelve varieties, Mr. John Smellie took the first prize and Mr. J. Lister the second. Twelve fancy Pansies in one variety is always an interesting class, and here Mr. J. Sutherland was first with Marmion, a soft pinkish-tinted flower that is very attractive. Col. R. G. Buchanan and George Stewart, both very fine varieties, were also shown. The class for unnamed seedlings is one which may be left out of the schedule.

In the amateurs' division there was a good competition. In the class for twelve fancy Pansies, Mr. J. McFarlane, Glasgow, was first, his leading varieties being Maggie McPhail, Annie Knowles, Mrs. D. Johnstone, and Mrs. W. Watson. Mr. Thomas Naden, Alviston, took the second prize. With six blooms, these exhibitors occupied similar positions. With twelve of one variety Mr. Naden came first with fine blooms of Tamworth Yellow, and Mr. McFarlane came next with Maggie McPhail.

The Violas were delightful, and the method of showing them in sprays on plush or velvet-covered stands seems to show them off to the very best advantage. As a matter of course not a few of the most attractive of the exhibition varieties may be useless for the flower garden, and that is one of the main reasons why it is desirable there should be a thorough trial of the leading Violas to test their value for bedding.

With twenty-four sprays Mr. J. Smellie came first with a charming lot, chief among them being Border Witch, Craigie, Mrs. C. F. Gordon, H. A. Stewart, Beautiful Snow, Lucy Ashton and Mrs. Hay. Messrs. J. Cheal and Sons, Crawley, were second, they having, as distinct from the foregoing, beautiful sprays of William Niel, Countess of Wharncliffe, Duchess of Fife, Lord Elcho and Countess of Kintore. With twelve sprays Messrs. Paul and Co. were first, having Iona, pale blue and black, very novel; Edina and Lemon Queen, as distinct from those already named, Messrs. J. Cheal and Son being second. With six sprays of rayless varieties Mr. A. J. Rowberry, South Woodford, came to the front; he had charming illustrations of A. J. Rowberry, a fine new yellow; Blush Queen, Christiania, Border Witch, Vestal and Blue Gown, a good half dozen in this section, the same exhibitor being first with six sprays of the miniature section, having Marginata, Violetta, Emily, Olivetta and two seedlings. There were other classes for Violas among the amateurs, in which there was generally a good competition.

The best fancy Pansy in the open classes was George Stewart, and the best spray of Viola Florizel. The best fancy Pansy in the amateurs' division was Mrs. D. Johnstone, and the best spray of Viola, Christiania.

Messrs. Dobbie and Co., of Rothesay, sent a very large group, comprising show, fancy, and tufted varieties, including all the newest and best known kinds. They were a fresh and charming lot considering the unfavourable weather we have had for these flowers.

Royal Horticultural Society.—The next meeting of the R.H.S. will be held on Tuesday, July 23, in the Drill Hall, James Street, Victoria Street, London. At 3 o'clock a paper by Mr. P. Brotherston on "The Carnation in Scotland" will be read.

National Carnation and Picotee Society (Southern Section).—I beg leave to remind your readers that the eighteenth annual exhibition of the above society will be held at the Crystal Palace on Wednesday, the 24th inst. Upwards of £150 are offered in prizes. Amongst special prizes may be mentioned the Martin R. Smith prizes for border Carnations, the flowers "to be cut from plants which have been wintered without protection in the open border, and staged without dressing exactly as they are cut from the plants." The Turner Memorial trustees give a very handsome silver cup, value £5, for the best stand of Carnations, bizarres and flakes, distinct, and twelve Picotees, distinct (amateurs only). Another special prize—not in the schedule of prizes—will be given by M. Ernest Benary, of Erfurt, Germany. The Ernest Benary memorial prize—a large silver-gilt medal—is given by the firm in memory of the late much-regretted founder of the firm (M. Ernest Benary) for the most meritorious exhibit, either of plants or cut flowers, by an amateur.—J. Douglas, *Hon. Sec.*

Notes of the Week.

Cytisus capitatus is a pretty and late flowering species, of which handsome bushes are now in bloom in the University Park at Oxford. It bears its flowers, which are yellow, tipped with bronze, in a clustered head at the top of the shoots. The growth is decidedly erect and profusely clothed with trifoliate hairy leaves.

Tropical Water Lilies are well grown by Mr. Baker at the Oxford Botanic Garden, and at the present time they are very beautiful. The forms of N. Lotus are very good, and the new N. Sturtevanti does well here. It flowered last year. Sagittaria montevidensis is represented by a great mass luxuriant in leaf growth, and flowering freely as well.

Campanula pumila.—This little tufted Harebell is a popular plant about Banbury, and we were pleased to see masses of it in gardens on the outskirts of the town. In one place it was a special feature, forming a broad edging about a foot wide to a long narrow border extending from the road to the house. It made a perfect edging of pale blue.

Michauxia campanuloides. — This fine biennial is worthy of more attention by those who have deep warm soils that suit it. We have lately seen some noble specimens that reminded us of its stately character and noble beauty. Some of the finest were nearly 8 feet high, much branched, and clothed with lovely flowers from bottom to top.

The scarlet-berried Elder.—This beautiful sub-alpine shrub has berried freely in my garden this year. As it has a bad habit of seldom doing so in these islands, I should like to hear whether any of your readers have observed the same thing. One would like to know whether the drought and heat have any effect that can be directly traced. I had no berries in 1893.—J. C. L., *Kent.*

—— This is one of the most brilliant berry-bearing shrubs we have, but, unfortunately, not often seen in gardens. At Eynsham Hall, near Oxford, it is now magnificent, several large bushes being laden with berries, which hang in thick clusters all along the shoots, weighing them down in a graceful arching manner. The situation is partially shaded and perhaps favourable, but we have never seen this shrub finer.

Oxfordshire wild flowers.—With all the country round parched and bare the beauty of the water flowers is doubly welcome. The streams that intersect the meadows in Oxfordshire are now in many places very gay with a tangled, but lovely mass of flowering Rush, Arrowhead, Water Plantain, giant Buttercups, Loosestrife and Meadowsweet rising out of carpets of Forget-me not and white Bedstraw.

Campanula carpatica Robert Parker.—This fine white-flowered dwarf Bellflower deserves to be better known. Mr. G. Paul says it was the last plant that he received from the late Mr. Robert Parker, whose name it fittingly commemorates. Although Campanula carpatica is easily raised from seed and gives much variety in this way, a form so fine as this, with its large expanded bells, is not likely to occur very frequently.

Clematis Davidiana has now established its reputation as a hardy species, and it is one of the sweetest and most beautiful of the herbaceous kinds. At Broxbourne it is already in bloom, and the plants, though quite in open quarters, are as strong and healthy as in previous years. Although it does not make a mass of bright colour, its clusters of flowers are very pretty, last a long time, coming in succession for many weeks, and their scent is delightful.

Rubus odoratus is a fine-flowering species to associate with the Rocky Mountain and Nootka Brambles. It most resembles the latter in habit of growth and broad, handsome leafage. We noticed a fine group of it flowering in the Botanic Gardens at Oxford, the flowers of a deeper shade of rose-purple than usual, although this may have been the result of the shaded position in which the plants were growing. As the name implies, the flowers have a delightful scent.

Physostegia virginica alba.—A pure white form of Physostegia virginica we saw at Cheshunt is a good hardy flower that many should grow. The type itself is very pretty, lasts long in flower, and is most useful for cutting, and this white variety should be even more valuable. The large open-mouthed flowers are thickly disposed on a long spike, which grows nearly 1 yard high. The type itself is in cultivation under a number of names.

Verbascum Blattaria, a pretty Mullein not often seen, is at present in flower in the Oxford Botanic Garden. At a casual glance one might mistake it for V. phœniceum, to which it bears a striking resemblance, especially in its delicate blush and pale tinted forms. The yellow-flowered variety, however, is specially distinct and charming, and serves to distinguish it from V. phœniceum, as we do not get this colour in that variable species.

Spiræa flagelliformis. — A bush of this Spiræa 6 feet through, growing on a bank, has been a fine sight during the latter part of June, the long curving shoots, which give it its name, simply smothered from end to end with rosettes of white Hawthorn-like flowers, having a very unique effect. Though not possessing the graceful beauty of S. ariæfolia and S. Lindleyana, it is when of large size a very striking shrub, which is less grown than its merits deserve.—S. W. F.

Lathyrus latifolius.—The common Everlasting Pea is a familiar garden flower, but we never before saw it so picturesque as it is at Broughton, in Oxfordshire, where beside the village school and on a high bank a number of plants are growing in a perfectly natural way. They creep over the ground, which is hidden beneath mounds of blossom, whilst here and there a few shoots have climbed into shrubs near at hand. The picture is a delightful one and suggestive to all who have gardens.

Eryngium amethystinum.—Sea Hollies are lovers of the sun, and the present season must have been very congenial to them. A large break of this kind we lately saw in Messrs. Paul and Son's nursery at Broxbourne was very fine, and we have rarely seen it so fine in colour. A charming feature might be made by planting a group of this in association with the silvery white E. giganteum. The picture would only be for one season, as unfortunately this latter kind perishes after flowering.

Eryngium Oliverianum.—This Sea Holly is at the present time a valuable plant in the herbaceous border, possessing as it does a colour almost unique in the flower world. Its light electric blue shows out in striking contrast to the green foliage of the Phloxes and the many-tinted flowers of the Alstrœmerias by which it is growing. As a subject for indoor decoration it is much in request, a few sprays rising out of a bowl of Love-in-a mist (Nigella) forming an extremely attractive combination. E. Oliverianum is sometimes confounded with E. amethystinum, but the latter is dwarfer growing and much less vigorous.—S. W. F.

Cypripedium Andronicus (C. Rothschildianum × C. superbiens).—This hybrid was raised in the nursery at St. Albans. The flowers are remarkably bold and richly coloured. To a certain extent they appear intermediate between those of the two parents, but the petals are as large as in Morganiæ, of a rich olive-green, spotted with chocolate. The dorsal sepal is a decided improvement on that of C. Rothschildianum, the bright chocolate lines being much more intense on an olive-green ground shading into white. The pouch is of a very dark, almost black chocolate, shading into a clear claret purple. This fine cross, which appears to possess a vigorous con-

stitution, is now in bloom in The Woodlands collection at Streatham.

Cypripedium Princess Mary (C. callosum × C. Sanderianum) is another beautiful addition to the Cypripedium hybrids, in shape resembling a fine C. Morganiæ and surpassing the very best forms of even that grand hybrid in colour. The dorsal sepal has the rich chocolate lines of C. Rothschildianum, but rendered still more vivid by the influence of C. Sanderianum; in fact, the colours throughout the whole flower are wonderfully dark and rich. The splendid purplish red pouch is very prominent, while the Morganiæ-like petals add a peculiar charm to this handsome cross. It was raised by Messrs. Sander and Co., and is now in flower in the collection of Mr. R. H. Measures, The Woodlands, Streatham.

Flowers from Winchmore Hill.—I am sending you a flower of Geum Heldreichi; it is not so good as the first blooms. Hedysarum multijugum is covered with flowers and is really very pretty. Haplocarpa Leichtlini has stood the winter well and has been flowering all the summer, now almost over. H. scaposa is showing bloom. I have also sent you flowers of Linaria repens alba, which is very pretty in a house. Prunella Webbiana, a small spike from cuttings, is also a very pretty plant and remarkably free. The following Lilies are also in bloom in the open: Browni, Colchesteri, Lowi, canadense rubrum, Humboldti, Parryi, Krameri, Van Houttei (Thunbergianum), Wallichianum and Washingtonianum. —Amos Perry.

Notes from Chester.—The Spiræas are in splendid condition and are conspicuous about the borders and shrubberies everywhere. Spiræa Bumalda ruberrima has, as you see, bright pink flowers that are very pretty and showy. S. ariæfolia, popular—we had almost written common—as it is, deserves even a wider field of admirers, for it could scarcely be surpassed for beauty. Its dense heads of creamy plumes wave about in the summer wind, and when the glare of the day is past the distant effect of these masses of subdued colour is charming in the extreme. Cytisus capitatus is a distinct type, and amongst the Veronicas few are prettier than Blue Gem, a sprig of which we send on to you. This particular variety is a great favourite in nearly all the gardens of our sea-coast towns in North Wales. It thrives splendidly, flowers freely, and is constantly bright and full of bloom amid the dingy surroundings of sea sand and shrubs struggling against the adverse circumstances and improper selection which may often enough rightly describe the seaside garden. —Dicksons.

New Delphiniums.—Few classes of plants have come to the front more rapidly than the Delphiniums. Some twenty years since Messrs. Kelway and Son, of Langport, Somerset, collected from every source all the varieties in commerce and commenced fertilising them with the view of working up some new varieties. Many of these have been exhibited at the metropolitan and other shows during the past ten years. In 1885 they observed amongst a large quantity of seedlings a single sulphur-coloured variety; this was fertilised with its own pollen and seed was produced. Some hundreds of seedlings were raised from this batch; two only came of a sulphur colour, the others being of various shades of blue and purple. The best of these, Princess of Wales (flowers of which we have received), was retained, and from seed of this variety others were raised. No. 2 (Beauty of Langport) was exhibited at the Royal Horticultural Society's meeting, June 11 this year, and was awarded a certificate of merit. All the sulphur-coloured kinds come true from cuttings, but from seed they invariably revert to the purple varieties. These sulphur-coloured varieties grow from 2 feet to 3 feet high, are of a very hardy, robust habit, with shining foliage, much resembling that of Aconitum japonicum, and very different from that of the purple varieties of Delphinium grandiflorum.

Water Lilies.—No flowers are more lovely, nd the question is often asked, "How can I grow such charming flowers?" In parks, on large estates and pleasure grounds, lakes and ponds abound that could be judiciously converted into a water garden, producing a grand effect in the landscape. With so many colours, ranging from the purest white through various shades of pink, crimson, sulphur to chrome-yellow, beautiful effects can be had on lake or pond. Here on the lake (where ice reigned supreme for two months) we have now a lovely picture, the following varieties being in bloom: Nymphæa alba candidissima, the large variety of the native Water Lily, flowers 6 inches in diameter, pure white, with broad petals, the earliest of all, and continuing till late; N. Marliacea albida, the best of hardy white Lilies, flowers large, dazzling white and fragrant, a vigorous grower, with fine bold foliage; N. Marliacea Chromatella, a grand variety, a vigorous grower, the foliage in a young state mottled with brown; its fragrant flowers fully as large as those of the common N. alba, with broad, waxy petals of a beautiful canary colour, and bright orange stamens; N. odorata rosea, splendid flowers, cup-shaped, of a lovely pink colour, with delicious fragrance. N. rosacea and N. Laydekeri rosea, together with N. Laydekeri lilacea, are all so much alike in the distance that one is inclined to say they are one and the same, nevertheless they are all grand additions; the flowers on opening are a delicate pink, assuming a deep rose the second and third day. N. Marliacea rosea is one of the choicest of hardy pink Lilies, flowers cup-shaped, very freely produced, colour richest pink, the plant vigorous, with dark-coloured foliage. N. Marliacea carnea, a superb variety, very robust and free-flowering, has large flowers of a flesh colour, each 8 inches in diameter, and standing well out of the water. The whole of the above are now in full bloom, edged with large clumps of the yellow Nuphar. The effect in the noonday sun is very fine.—M. J.

Obituary.

THE LATE MR. JOHN WILLS.

Mr. Wills, to whose death we briefly referred in our last issue, was born at Chard, Somerset, in 1832. He first went into the gardens of Cricket St. Thomas, Chard, the seat of Viscount Bridport. As far as particulars can be gleaned of his early life, he went from here to St. John's Wood, London, as gardener to a Mr. Woodcock; later he was at work under Sir Joseph Paxton at the Crystal Palace and at the Pine-apple Nurseries of Messrs. A. Henderson and Son at Maida Vale. Subsequently he was gardener to Sir Edward Bowring, of Clapham Park; to Mr. Kennard, of Harrow Weald; for a time in the South Kensington Gardens of the Royal Horticultural Society, under Mr. George Eyles; and thence to Oulton Park, Tarporley, Cheshire, as head gardener to Sir Philip de Grey-Egerton, Bart., where he remained five years. While at Oulton Park he raised several fine new varieties of bicolor Pelargoniums, such as Her Majesty, Beauty of Calderdale, Beauty of Oulton, Beauty of Ribbesdale, Gaiety, Golden Queen, &c., which were put into commerce by Mr. William Bull, together with such tricolor-leaved varieties as Florence, Lizzie, and Unique. It was while at Oulton Park that Mr. Wills brought into such prominence the value of Viola cornuta as a bedding plant. After leaving Oulton Park he went as head gardener to Capt. Le G. N. Starkie, Huntroyde Park, Burnley, where he raised Willsi and Willsi rosea Ivy-leaved Pelargoniums, &c. Leaving here he came to London in 1870, and established himself in business as a nurseryman and floral decorator at Sussex Place, Old Brompton, and later on at Onslow Crescent, acquiring plant nurseries at Fulham and Anerley.

As a floral decorator Mr. Wills became widely known, and his work was always characterised by great originality and high-class execution. He carried out extensive decorations at Buckingham Palace, Marlborough House, the Government offices, the Mansion House, and several private residences with a boldness that gained him high praise. On the opening of the Royal Aquarium at Westminster as a summer and winter garden he designed and planted the same, maintaining it for a considerable period and carrying out a series of important exhibitions. On the occasion of the visit of the Prince and Princess of Wales to Sheffield many years ago he decorated the Midland Railway Station and the Queen's Hotel in a very elaborate manner; he also organised a large flower show at Sandown Park, and in the seventies superintended some extensive alterations at the Royal Palace at Laeken for the King of the Belgians. When the botanical congress was held in 1866 in connection with the International Horticultural Exhibition of London in that year he contributed a paper on "The Sporting of Pelargoniums and Other Plants," which was published in the Report of Proceedings. He also published papers on the "Origin of Variegated Pelargoniums" and kindred subjects. He leaves a widow, who carries on the business at Onslow Crescent in conjunction with Mr. S. M. Segar. By his death the Royal Gardeners' Orphan Fund loses an able member of the committee and a generous supporter.

The weather in West Herts.—During the past week the weather has been somewhat cooler and less forcing to vegetation; in fact, on four days the highest shade temperatures were below the average for the time of year. The ground temperatures still remain high, but not quite so high as in the previous week. At 1 foot deep the reading is at the present time 3° above the July mean for that depth and 6° higher than on the same date last year. On the 11th inst. nearly two-tenths of an inch of rain fell, but a few hours afterwards the ground was as dry as ever. It is now seven weeks since any rain-water at all has come through the 2½ feet of soil in either of the percolation gauges.—E. M., *Berkhamsted.*

Insects on Dahlias.—Herewith I send you living specimens of an insect wholly unknown to me which two or three days ago made its appearance on some Dahlias, Celery, Asters, &c., and I enclose a few affected leaves for your inspection. I should like to know its name and the best means of getting rid of it. I am informed that last year, previous to my taking charge here, the insects affected Melons in a like manner, rendering them quite useless.—E. J. C.

*** The insects you sent are small weevils belonging to the genus Apion. The members of this genus feed on the leaves of various plants. Many of them might be shaken into a bowl of water, or the plants might be syringed with 3 lbs. of soft soap, the extract from 4 lbs. of quassia chips and 50 gallons of water, or some other good insecticide.—G. S. S.

Insects on Vanda cœrulea.—I have found the enclosed insects to-day on a plant of Vanda cœrulea; I also send a piece of leaf eaten by something. I have not been able to find any other insects on the Vanda. If you can give me any information respecting them through The Garden I should feel greatly obliged. The Vanda is one of a batch imported last February.—G. H. B.

*** The insects you found on your Vanda cœrulea were specimens of an exotic plant bug. They were in an immature condition, consequently it is difficult to name them. The injuries were, I expect, caused by these insects. Should you find any more a little later on and would kindly send them to the office, I should probably be able to name them. By all means destroy all you can find.—G. S. S.

Names of plants.—*E. Pidsley.*—Not equal to many forms now in cultivation.

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"This is an Art
Which does mend Nature; change it rather; but
The Art itself is Nature."—*Shakespeare.*

Flower Garden.

LILIES AT OAKWOOD.

In a rather elevated position and well exposed L. Krameri has bloomed very well, but although the plants are healthy and the flowers perfect there is a vast difference in the appearance of those growing in another part of the garden, and which are in the enjoyment of totally opposite conditions. These latter are in a very sheltered place, where but little sun can reach them and cold winds cannot directly influence them. The foliage is as rich in colour as that of L. speciosum, one stem carrying six blooms and running up to a height of 5 feet. It is not often that one sees this lovely Lily in thoroughly good condition, and it very seldom attains such vigour as at Oakwood. In a general way the flower-stems produce from one to three flowers only. It is one of the loveliest of the Lilies, and the pity is that the conditions, necessary to secure perennial vigour cannot easily be secured in gardens generally. L. Browni is another Lily that one does not often meet with doing well in the open ground. It appears to be well established at Oakwood, throwing up stout stems several feet high, with healthy deep green foliage, and looking very different from the specimens that one sees sometimes grown in pots, and which give no idea of the true vigour of this beautiful Lily. I was much impressed with the fine appearance of a group of L. pardalinum, consisting of about 100 bulbs. The growth is vigorous, the plants being well set with buds and clothed almost to the soil with ample, deep green leaves. The appearance of this Lily under such conditions is remarkably pleasing. I am of opinion that L. pardalinum should get more attention than is now the case from growers of hardy flowers. From the fact that the above-mentioned group is on high ground in a rather exposed position and not a leaf shows sign of distress from heat and drought, I should imagine that it is not so hard to please as most of the finer forms of the family. It ought to do in any garden where the soil is good and a fair amount of shelter can be had. In any case I would advise all who love Lilies to try a bulb or two. Another Lily that much resembles the above in the fresh rich green of the foliage is L. Humboldti. It is evidently quite at home at Oakwood. A group of seedling forms of Szovitzianum had thrown up tall stems among the branches of a low-growing Apple tree. The flowers exhibited some little diversity in colour. This seems to be a free-growing Lily that ought to succeed under fair garden culture, but it is difficult to draw definite conclusions with respect to Lilies in this matter. With them the unexpected often happens, and just where one might expect them to do well, they not unfrequently refuse to thrive and sometimes die out. I have known both auratum and speciosum to act in this way in beds of carefully prepared soil whilst doing splendidly in an adjacent garden in ordinary ground that vegetables had been grown in for generations. Mr. Wilson's practice has been to distribute each Lily as much as possible, and it is in this way that success in the case of any particular species is most likely to be attained. It is then easy to compare results and form an idea of its needs. A bulb planted at random may find the conditions necessary to its welfare and which might be wanting in other parts of the garden.

J. C. B.

LATHYRUS MAGELLANICUS.

As I am quite as anxious as your correspondent "D." to discover and obtain a plant of the beautiful blue Pea known to botanists under the above-mentioned name and also as Lord Anson's Pea, I sincerely hope that the eminent and well-known introducer of new and interesting plants who writes from Ipswich in answer to "D.'s" question in your last issue may be mistaken as to this most lovely of perennial Peas being lost to cultivation and that we may yet one day see it brightening our walls and herbaceous borders. Besides the portrait cited in the answer to your correspondent's question, it is also figured in a much more satisfactory manner by Sweet on plate 344 of the fourth volume of the second series of his "British Flower Garden," and a well-known northern plantsman assures me that for many years he grew a Pea identical with that figured by Sweet, and distributed scores of plants of it to various customers, but has now run out of it. In Mrs. Loudon's "Lady's Flower Garden" the name of L. Armitageanus is given as a synonym for L. magellanicus, and as I have recently received from a correspondent in Scotland a plant of a Pea under this name which I believe he originally received from the Yorkshire nurseryman above mentioned, I am not without hopes that this when it blooms (which I fear it will not be strong enough to do this year) may turn out to be the perennial sky-blue Pea which I am so anxious to possess. On the other hand, a plant is figured in Maund's "Botanic Garden," vol. 6, plate 526, under the name of L. Armitageanus which is said to approach nearer to magellanicus than any other that has been described, and to differ from it only in the stipules being narrower, and not broader, than the leaflets. It is said also to be perfectly hardy and almost evergreen. Again in that beautifully illustrated and exceedingly seldom-met-with work, Knowles and Westcott's "Floral Cabinet," vol. 3, plate 110, I find another good figure of Lathyrus Armitageanus which in the accompanying letterpress is said to be a native of Brazil, and consequently only half hardy in Great Britain, but easily propagated by cuttings, as it but seldom ripens seed. It was introduced into the Birmingham Botanic Garden in 1834. It seems to me, after carefully comparing all these above cited coloured plates, that the flowers of L. magellanicus as figured by Mrs. Loudon and Sweet are decidedly of a more beautiful shade of cœrulean blue than those of L. Armitageanus as figured by Maund and Knowles and Westcott, the flowers of the latter variety being of a distinctly purplish hue and also rather smaller. There is also a conflict of testimony between two of these authorities, as Maund says L. magellanicus is an annual, whereas Mrs. Loudon says it is a perennial plant. W. E. Gumbleton.

Campanula persicifolia.—Backhouse's form of C. p. alba grandiflora is up to the present time a decided improvement upon all others, but Mr. Ladhams, by carefully hybridising and selecting the best forms, has obtained a plant more robust than the type itself.—E. M.

Delphinium grandiflorum.—I see a note (p. 12) on this plant which induces me to ask whether the writer of it or any other of your readers can tell us anything about it. It is a plant greatly to be desired, but I have never been able to keep it through a winter in the open myself, nor have I ever known anybody who could, nor have I ever seen an established plant in a private or nursery garden. On the other hand, it is undeniable that the principal nurserymen who deal in these sorts of things continue to offer it at a price varying from about 2s. 6d. to 3s. 6d. or 5s., though it never seems to get cheaper. It is clear, therefore, that it must be grown (and to some extent multiplied) somewhere, and what I want to know is whether this is done in these islands (in warm light soils, for instance), or whether they manage these things better in France, or whether the heathen Chinee has it up his sleeve along with the rest of his tricks that are vain. The single D. sinense is itself little more than a biennial, but then this is raised from seed with the utmost ease, which, of course, does not apply to the double variety.—J. C. L.

Viola Christiania.—A spray of this variety obtained the award for the best, selected from the whole exhibition, at the late Pansy show. It is a nicely formed flower of the faintest lemon-coloured white, with a conspicuous orange spot in the centre. Something may be said of the lasting qualities of the blooms in a cut state. I saw the above spray one day after the show and it was comparatively fresh. The flowers were cut the night before the exhibition, and from that time to the time I saw them they had been severed from the plant forty-eight hours, besides bearing the heat of the Crystal Palace. The plant has a tufted habit of growth and is free flowering.—H.

FLOWER GARDEN NOTES.

Failures.—Each year in connection with the summer bedding it is advisable to note any failures that may occur, so that if necessary one can find substitutes for those plants that have not been satisfactory. Of course one has to make allowances for special seasons; it would hardly be fair, for instance, to condemn anything on trial for the first time if it failed in a season like the present, especially if there has been no chance of watering. Concerning those plants which in the majority of places were once prominent favourites, but which are now seldom seen, it is fortunate that efficient substitutes have been found for them nearly what is required in the matter of colour, and immeasurably superior in adapting themselves fairly well to all soils and situations. Thoroughly good strains of Phlox Drummondi and Petunias for Verbenas and Marigolds, Violas and yellow Tropæolum for Calceolarias, are cases in point. So far as Verbenas are concerned, it is somewhat strange that whilst in a few places they still do remarkably well, in others it is practically impossible to do anything with them. I remember a place where they were bedded in thousands, and were the finest feature in the flower garden until a disease in the shape of a kind of black mildew made its appearance, and after a couple of years the culture of Verbenas was reluctantly abandoned. It seized on the tips of young shoots, and although it yielded to dustings with flowers of sulphur, the growth was checked, and new growth so soon as it appeared was again attacked if the applications of sulphur were not followed up. It was before either Phlox Drummondi or Petunias were represented by such fine bedding strains, and efficient substitutes for the Verbenas were rather hard to find. I fancy the decline of Verbenas gave the first strong incentive to the cultivation of tufted Pansies so far as the summer flower garden is concerned. Still more common than the failure of Verbenas is that of bedding Calceolarias; few gardeners attempt the cultivation of these miffy subjects, and a thoroughly good display is very seldom seen. I have sometimes been fairly successful with them by taking out a good portion of the natural soil and working in leaf soil and moist red sand in the proportion of three to one, but such a compost would have to be practically flooded every second or third day in a season like the present if the plants were to do any good. Yellow Antirrhinums and Calendula Orange King are the best fairly large substitutes for Calceolarias, but to have the Marigold last out the season, decaying flowers must be promptly removed, and the plants get plenty of water if the weather is hot and dry. Tufted Pansies Bullion, Sovereign and Lord Elcho, and Mrs. Clibran Tropæolum are good dwarf yellows. In the lighter shades there is no plant makes a more beautiful bed than the prim-

rose-coloured Chrysanthemum or Paris Daisy, if one can keep the maggot from the foliage. This is imperative, as the plants when bored all over by this objectionable insect have a very rubbishy appearance. I can do very little with Begonia Worthiana, and shall be glad to know if any readers have a similar experience. Both in 1893 and 1894, two directly opposite seasons from a climatic stand point, itfailed to give satisfaction, and I have therefore been obliged to discard it reluctantly because where it does well it makes a very handsome bed, and if planted thinly on a dwarf carpet, individual plants grow to a large size.

HARDY FLOWERS.—This is the first time since planting Alstrœmerias twelve years ago that I have to chronicle a failure. The growth is only about half the usual height and flower-spikes are few and far between. Hemerocallis in variety are plentiful, but although somewhat similar in colour, they lack the delicate beauty of the Alstrœmerias. Possibly there are few more beautiful hardy plants just at present than the red and white forms of Everlasting Pea. I saw them to perfection the other day in a cottage garden, very large clumps growing on either side of a path and forming a delightful arch overhead. Both varieties might be planted largely more frequently than they are in nearly all places where hardy flowers are extensively used; they possess the merit of standing well in a cut state, and the white variety is especially valuable. They have the reputation of moving badly, but, in common with many other hardy plants, it is more a question of well-prepared ground, careful lifting and re-planting, a good surface mulching and, if necessary, one thorough soaking of water. Very vigorous growth or a great profusion of flower must not be expected the first season, but if a sturdy healthy vine that keeps the foliage well is secured, the ultimate success of the shifting is undoubted. Nearly the same remarks are applicable to all herbaceous plants which, although all the better if not disturbed when once established, may yet be moved with impunity if the operation is carefully performed.

ANNUALS.—Owing to the comparative failure of several families of herbaceous plants there is rather a dearth of flowers for cutting, except from the Carnation beds, and the value of good batches of those annuals that stand well in water, as Godetias, Cornflowers, Stocks, Malope and Sweet Peas, is thereby considerably enhanced. It seems rather strange to advocate the mulching of beds of annuals, but where they have been sown mainly to secure cut flowers such treatment will be found advisable, if not imperative, if a long sustained season is required. The best things we have at present are Sweet Peas, the two varieties of Malope, Iceland Poppies and the small-flowered single Helianthus, and last, although not least, the varieties of Sweet Sultan. Where the ground was not thoroughly well done the annuals are a decided failure, the prolonged drought having brought them to a premature end. Plants raised somewhat late for autumn cutting, as Scabious, or for autumn transplanting, as Wallflowers, had to receive special treatment. The borders had a good dressing of manure, and were dug up deeply, they received a slight treading to settle them down, and, drills being drawn, a good soaking of water was given an hour or two before the seed was sown. E. BURRELL.

Claremont.

Hemerocallis Kwanso foliis variegatis.—This handsome Day Lily is now in bloom. Its flowers are very similar in colour to those of H. fulva, the petals being of rather greater consistency and oftentimes striped with a lighter tint. Its chief beauty, however, lies undeniably in its foliage, which is beautifully variegated in longitudinal stripes. One clump that I have possesses leaves almost perfectly white, lined with thin stripes of green. In another clump the colours alternate in equal proportions, while in a third the green predominates. By some this plant is recommended for greenhouse culture, it being judged by them to be of doubtful hardiness. Though specimens are undoubtedly extremely decorative in the conservatory, my experience points to H. Kwanso f. v. being equally hardy with H. fulva and H. flava, my plants having withstood 22° of frost and the late protracted winter alike without injury, and having grown in size and beauty year by year. It is a plant which is, unfortunately, but little known in gardens, but, owing to its extended season of attractiveness, there are few occupants of the herbaceous border that surpass it in value.—S. W. F.

ALSTRŒMERIAS FROM SEED.

I HAVE raised plants of a white Alstrœmeria from seed for the greenhouse, and wish to know whether the plants should be plunged in fibre like bulbs. The pots are at present standing in the open.—INQUIRER.

*** "Inquirer" would have materially assisted us in our desire to furnish information by stating the age of the plants and also the variety grown. The many species and forms of this beautiful genus are as varied in their requirements as they are in hardiness and time of flowering. In the absence of precise information, however, we may reasonably assume that the white Alstrœmeria referred to is A. pelegrina alba (the Lily of the Incas), probably the most chaste and beautiful of this useful group. It is, however, a tender kind, and must always be grown secure from frost, preferably in a cool greenhouse. Seedlings of this charming plant require very liberal treatment in their earlier stages, and if sown thickly in pots or pans should be transplanted as soon as large enough, four in a 5-inch pot or five in a 6-inch pot being quite enough to permit of the full development of the tubers. The soil best suited is loam, peat, leaf soil, together with some well rotted manure, about one-sixth, and a little sharp sand. The plants should be grown on till they exhibit signs of decay naturally, at which time water should be gradually withheld. When the growths are fully ripened off, the pots containing them may be plunged in ashes or cocoa-nut fibre in the open. With young seedling plants extremes of dryness should be avoided, and therefore sufficient water must be given to keep the tubers comparatively plump. Plunged in the open in their pots, water once a week will be sufficient to secure this condition. If the seedlings have been transplanted several in a pot, as suggested above, it will be best to transfer them to 8-inch or 9-inch pots, with as little disturbance as possible when re-starting into growth. But should the young plants be in any way crowded in their present pots, the best results will be secured by shaking them out early in the ensuing autumn, replanting the largest tubers five or six into pots 8 inches or 9 inches across. The soil above named will suit them well, affording a fair amount of drainage, and when in full growth liberal supplies of water at the root. A little clear soot water twice a week will give colour to the foliage.—E. J.

DISEASE IN LILIUM CANDIDUM.

Now that the flowering season of the Madonna Lily has arrived it may be well to draw attention to the disease which has decimated its ranks for the last few years. A careful perusal of vols. 45 and 46 of THE GARDEN can but lead one to the conclusion that, widespread though the destruction seems to have been, no definite opinion as to the cause of the visitation has as yet been arrived at.

I find that fourteen notes on this subject are contained in the two volumes mentioned, and that the causes assigned for the epidemic are almost as numerous. One writer ascribes it to the heavy rainfall and the sodden state of the earth, another points out that the disease appears in dry as well as during wet summers, a third puts it down to poverty of soil, a fourth to injury of the foliage by storms, while a fifth disproves this contention by quoting the fact that bulbs grown entirely under glass are likewise liable to failure from the same cause. My own theory is, that the disease is mostly, if not entirely, confined to imported bulbs.

I gave (vol. 46, p. 123) an account of a row of one hundred bulbs that had succumbed, whilst a bulb that came from a cottager's garden and which was growing not 3 yards distant from the affected imported bulbs showed no sign of disease. This year the single bulb has thrown up three stems, each about 4 feet high which are blooming grandly, while the hundred that after their failure were relegated to the kitchen garden have produced but one flowering spike, the remainder of their foliage being much spotted by disease and some of the foot-high stems rotten, as are many of the bulbs which I have just examined. In the cottage gardens around, L. candidum flourishes in perfection and has apparently done so for ages. Even in years when disease has been rife among the French bulbs I have never seen a sign of it on the cottagers' Lilies, which appear to grow with equal vigour in light and in heavy soil, in dry and damp situations, in the sun and in the shade. The other day I came across a Madonna Lily 5 feet 8 inches high with a head consisting of thirty-one flowers, the finest specimen that I had ever seen. In a neighbouring nursery out of a large plot of imported bulbs not a single flowering stem has been produced, and another garden that I know of where similar bulbs were procured has fared equally badly. The conclusion that is forced upon me is that had we trusted to home-grown bulbs, the disease would never have appeared. I shall be glad to elicit the opinions of others on this subject, as I hope that if we can but fathom the cause, we may be able to stamp out the plague spot that works such havoc in our Lily beds.

S. W. F.

EVERLASTING PEAS.

I SHALL be glad to be informed why it is that in some districts the common Everlasting Pea (Lathyrus latifolius) comes so much larger and deeper in colour than in others. I cannot think that it shows any real distinctness, because I have seen in old farmhouse gardens in Kent very fine forms of it, and on bringing rooted plants to the neighbourhood of London have found them to assume an inferior form. I have also raised many seedlings from a fine type only to find not one reproduce the fine parental character. Cases have been known where an unusually fine development has occurred, but the progeny has rarely, if ever, developed unusual quality. When at Boston a few days ago I saw growing against the entrance to Burton Hall, the residence of Mr. Alfred Johnson, a huge bush, the flowers large in size and brilliant in colour, unlike what one can find in the neighbourhood of London, but which can yet be met with in various parts of the country, the colouring superb, the size and substance remarkable. I seem forced to the conclusion that it is very much a question of cultivation, and that some property in the soil governs this striking fineness of development.

At Ealing I cannot induce the white form of L. latifolius to grow with anything like satisfaction. I have made the ground specially for it, mulched it, watered it in dry weather, and then only to find it fail. But the variety known as delicatus, the blush flowers delicately tinted and striped with pink, does remarkably well, and blooms with great freedom. It is a beautiful variety, an excellent companion to the purple and white forms. The difficulty of getting seeds saved from the white variety to produce white flowering types is well known, as so many of the plants bear purple flowers. In the case of delicatus the proportion of plants true to the type is a good one. With me the last named appears to bloom much more freely than the common form. The larger dwarf-growing perennial Pea, commonly known as L. grandiflorus—its flowers of great size, the colours purple, crimson and rose—appears to do well anywhere when once established and let alone. It is the earliest of the perennial Peas to

bloom, and very rarely produces seeds, though I have known a very few put in an appearance in the course of a hot, dry summer, and in such a season as this some seeds may be discovered. Next in order of blooming is the form of L. rotundifolius, grown under the name of L. Drummondi. This is the name under which I received it from Mr. Charles Green. There is enough difference between the two to justify its being classed as a variety, and I find it comes quite true from seed. It is a vigorous grower and blooms most profusely, the flowers of a lively salmon-carmine tint. A well-established plant of it forms a dense bush. I find all these perennial Peas are greatly helped by a mulching of good manure in early spring, and during dry weather they will take full supplies of water. If thus liberally treated, clumps will stand for years and be objects of great beauty if carefully staked and the branches kept firmly tied to them.

Previous to sowing seeds of Everlasting Peas it is well to soak them in water for a few hours, especially so if the seeds are a year or so old. This is a wrinkle I learned from Mr. Charles Green. I allow the seeds to soak in the water for eight or ten hours, and then four or five hours after I take them out, sow them, and they soon germinate. I sow in pots and pot off as soon as large enough.

R. D.

Sweet-scented Verbena hardy.—In the autumn of 1894 I plunged a number of stools of Chrysanthemums of various kinds in their pots when flowering was completed. The whole of the plants occupied a position against the wall of a greenhouse, where they would receive considerable protection. Coal ashes was the material used, and with this the stools were covered quite 3 inches deep. But quite by accident a plant of the above Verbena, which must have been standing near, was included with the Chrysanthemums, receiving the same covering. It was no surprise that the excessive and long-continued frost early this year was sufficient to kill the Chrysanthemums, and having abundance in reserve, I did not hesitate to discard them. In doing this the plant of Verbena was discovered just breaking into growth quite freely. It has since continued to grow and is now nicely in flower. In warm, sheltered positions in the Isle of Wight I have seen large examples of this plant, with a stem of considerable size, which at first surprised me greatly; but I was not prepared to witness the same plant enduring from 20° to 32° of frost in the county of Middlesex with impunity. After such an experience one is led to inquire whether, by affording slight protection in winter at the base, this plant may not be usefully employed in our shrubberies. At any rate, on warm soils it is worth a trial.—E. J.

ORCHIDS.

NOTES ON DENDROBIUMS.

Many of these are now approaching the end of their season's growth, while others are still a long way behind. The evergreen short-bulbed species and varieties are many of them very quick in growth, and it is not uncommon for them to make two sets of growth in a season, especially if grown in the same house as the deciduous kinds. D. aggregatum is one of the smallest growing, and takes only a few weeks from the time it starts until the little pseudo-bulbs are complete, and with this it is inadvisable to let them grow away again. In fact, with all Dendrobes it is much better to keep them to their annual routine as far as practicable, nothing being gained by the extra growth. D. heterocarpum usually finishes up early, and is better for a few weeks' rest before the flower-buds appear. The earliest plants of D. nobile should as soon as the last leaves make their appearance be placed in the full sun and well watered until the stems are quite complete, when less heat and moisture are necessary to induce a thorough rest. D. macrophyllum and D. Dalhousianum are two sorts that are often late in growth, the latter especially rarely finishing much before the end of the year. As it does not, however, flower until the growths are at least two years old, this does not matter, for one set of stems is ripening and forming flower-buds while the other set is growing. D. thyrsiflorum and allied kinds are rather erratic in their manner of growth, several plants not yet having any sign of breaking. With this, as the last-named, there is not time now to get flowers upon this season's bulbs, though if started early and well ripened in autumn, the plants usually flower on the last year's pseudo-bulbs. The tiny-growing D. pulchellum requires a good rest before flowering, and so does D. Falconeri, but neither must be dried sufficiently to cause the pseudo-bulbs to shrivel. If these small-growing kinds were given less heat during the winter and more judiciously watered, there would be less cause for complaint as to their not thriving satisfactorily. What they all like is to be very firmly fixed to their adopted home, be it basket, block, or what not, duly excited into growth in spring and kept cool afterwards.

There are few Orchids, as a matter of fact, that require less heat during winter than Dendrobiums, many of them standing a few degrees of frost with impunity. Of course, no one would think of allowing the temperature to drop so low as this if it can be avoided, but anything above 48° is too high for the majority of these during the long winter nights. There are several of the genus that will not stand so low a temperature, and among these may be mentioned the Australian species, as D. bigibbum, D. Phalænopsis, and others, also the late autumn-flowering D. chrysanthum, which is frequently in full growth during the winter months.

Besides the difference in their manner of growth, careful growers will note also the varying kinds of roots, and endeavour to give each a suitable kind of rooting medium and receptacle to grow in. Many of the long-stemmed deciduous group with their small twining and interlacing roots, such as D. Bensoniæ and D. crassinode, delight in a rather close root-run, and are well adapted for the small shallow pans now so much in vogue for Orchids. Then we have such deep-rooting kinds, as D. nobile or D. superbum, that quickly adapt themselves to any style of pot or basket, but preferably those with plenty of depth. These, too, like rougher, more open compost, one allowing free passage for air amongst them. Another kind of root is that of D. infundibulum and several of the nigro-hirsute group, that though strong and robust-looking cannot endure to be covered with peat or moss to such a depth as in the kinds mentioned above. These like a shallow compost, the pots varying in width according to the liking of the several kinds and the strength of individual plants.

Some may be inclined to think that this observation of the likes and dislikes of such easily grown plants is needless, and consequently pot all alike, keeping up the temperature they think most suited to the majority and leaving the rest to chance. This may do for a time, but sooner or later the time of reckoning is sure to come, and such haphazard modes of culture will only have the effect of keeping the hardier and more easily grown kinds in health, while the more fastidious and weakly species will gradually become weaker, and it is then only a question of time before they cease to be of any real value. I would, therefore, again urge amateurs to throw over what may be termed the collective mode of treating their plants, studying closely the wants of such species as are not usually satisfactory with them, and persevering in the treatment that their observations point to.

R.

ORCHIDS AT LONG MELFORD.

The amount of success achieved by interested amateurs in Orchid culture is remarkable, and I was forcibly reminded of this recently when calling upon Dr. Turner, of Long Melford, Suffolk. This gentleman's collection is not large, but each plant in it bears the impress of careful and attentive culture. Two small lean-to houses are all that are given up entirely to Orchids, though there are several others devoted to stove and greenhouse plants, the better class of fine-foliaged plants and Palms apparently coming in for a large share of attention. In the cool house a compact and excellently grown specimen of Epidendrum vitellinum majus was flowering freely, bearing six spikes unusually large and brilliant in colour. Odontoglossum Harryanum was in strong force, one plant having exceedingly large flowers, the sepals measuring considerably over an inch across, and of that deep maroon colour so much admired in this species. O. crispum, O. Pescatorei and others of this section are here well grown, those in flower showing a careful selection, whilst all are in the most robust health. Passing to the warmer division, the same robust health in the plants is observable. Several fine pieces of Cattleya Gaskelliana were in flower, the colours very rich and varied, while C. labiata autumnalis gives promise of great things in the near future. A large and well-flowered plant of a good variety of Brassia verrucosa deserves note. The plant referred to was growing in a 6-inch pot, and the head of bloom must have been nearly 3 feet across, six long arching spikes crowded with the elegant singularly-formed flowers, with less of the greenish tint on the sepals and petals than is usual with this kind. Dendrobes are well grown, but not many were in flower. A finely-flowered D. Falconeri, however, deserves note not only on account of the number of blooms, but the health and vigour of the plant. Odontoglossum Roezli album is also quite at home and flowering freely. Several others that usually flower at this season were represented, and doubtless there might have been many more, but Dr. Turner wisely considers it best to have the plants left to bloom another year and cuts the flowers after they have been a reasonable time upon the plants.

R.

ZYGOPETALUM MAXILLARE.

It is unfortunately the exception rather than the rule to see this beautiful old species thriving under cultivation, but one occasionally meets with it in good condition. The habit of the plant is rather peculiar; it produces a creeping rhizome upon which the small ovate leafy pseudo-bulbs occur. The blossoms, produced on erect scapes from the base of the matured pseudo-bulbs, are each about 1¼ inches across. The sepals are greenish with large blotches of chocolate, the lip rounded, blue with a deep purple crest. The flowers last a long time in perfection, but should not be allowed to remain on the plant too long. This Zygopetalum is usually kept too hot, the temperature of the Cattleya house being quite high enough at all seasons, and much better than that of the East India house. The habit of the plant is the cue to its requirements as to compost, all these creeping species abhorring a close, heavy mass of material about their roots. It is frequently found growing naturally on Tree Fern stems, and this mode of culture is also adopted under cultivation. Where these are growing in a temperature as described above they are the best of homes for this Orchid, but to wire the plants to the stems in a dry conservatory, as I have seen on

more than one occasion, is quite as bad for the Orchids as the Ferns. If suitable lengths of Fern stems can be procured and these sunk into pots, the bottom of each being surrounded with crocks and a little Sphagnum, the plants often thrive for many years, or they may be wired to cork blocks with a little Sphagnum, not all over the block, but in places, so that the roots have the choice of Moss or cork, the Sphagnum keeping a little moisture near them. Baskets are sometimes used, and if the plants are sufficiently vigorous to take to the compost they do very well, but small or weak plants do best as described above; the roots are then dry for an hour or two in the day, which is very conducive to the health of all epiphytal kinds if there is a sufficiency of moisture in the atmosphere. A great deal of care is necessary in ventilating a house where such plants as these are growing, especially if a steep pitched narrow structure. These part with the atmospheric moisture very readily, and while plants growing immediately above a moist stage may be adequately supplied in this respect, those near the roof will be parched from want of moisture. An important point in the culture of this Orchid is keeping the atmosphere well supplied with ammonia by the usual means. I have frequently observed that the nearer a plant comes to a true epiphyte the greater the advantage accruing to it from this source, Cypripediums and other terrestrial Orchids not benefiting in a like degree. In most houses there are places where a little soot and lime may be sprinkled about, this being a capital agent for supplying the ammonia and also distasteful to slugs. Z. maxillare requires an abundance of water at the root if growing as described above and must never be dried off even in winter. It was introduced from Brazil in 1844. R.

LÆLIAS.

THIS splendid genus contains some of the most popular and beautiful Orchids in cultivation, and no collection can be worthy of the name unless some of them are included. The larger growing species are gorgeous, while the smaller kinds are surpassingly beautiful and useful for cutting for almost every purpose for which cut flowers are likely to be required. As regards their structure botanically, Lælias closely resemble Cattleyas—indeed, some botanists have included them with that genus. Some of the species, too, greatly resemble Cattleyas in habit, and this section thrives under similar conditions as to compost and temperature. The dwarfer-habited kinds, such as L. anceps, require usually less heat than Cattleyas and rather different treatment. They are, in fact, rather more difficult to grow unless certain details of culture are carefully attended to. None of them like a great amount of rooting space, and if grown in pots the compost layer must only be superficial and the drainage must have special attention. Possibly the best of all modes of growing them is on trellised rafts, so that the roots have always plenty of air moving about them, and are not hampered by closeness of material. L. autumnalis, for instance, delights in this treatment, and will in this way be more satisfactory than if grown in pots or pans. During the growing season they must have abundance of air and sunlight, otherwise it is useless to expect flowers. If this is carefully attended to the temperature is really of secondary importance, but all of them will thrive in a maximum summer heat of 75° by day, 60° by night. This will induce a solid growth, the foliage taking on a bronzy or russety hue that is a sure sign of health, much preferable to the light green colour of plants kept in a strong, moist heat. Owing to the amount of sunlight they need and the freedom with which the air currents must play over the roots, they need very frequent examination for water, twice or even thrice daily when growing freely. When the pseudo-bulbs are quite finished, such of these as do not produce the flower-scapes at once may be kept nearly, if not quite dry at the roots. A few weeks' exposure to the open air is also very desirable, the plants being arranged in a pit from which the lights have been taken off or in any other sheltered position. Here they may remain until early frosts are impending, when they must again be placed under glass. Many of the Lælias flower during the autumn and early winter months, and on this account are valuable, as this is the time when good Orchids are scarcest. Among these may be noted

L. AUTUMNALIS, which greatly resembles the spring-flowering L. anceps. The flower-spikes spring from the apex of the newly-formed pseudo-bulbs, and attain a height of 1 foot to 18 inches, bearing eight or ten large flowers. In the type these are rosy purple in ground colour, the lip being very attractive; the front of this is streaked with purple, the side lobes white and the centre bright yellow. It is a variable kind, several varieties having been named. All are fragrant, and the flowering season extends from July until November. The type was introduced from Mexico in 1836.

L. DIGBYANA is a very remarkable Orchid, known perhaps better as a Brassavola. The labellum of this is deeply fringed, the colour being sometimes pale purple on the sepals and petals, the lip creamy white. This plant delights in plenty of heat and sunlight, being a native of Honduras, whence it was introduced before 1846, this being the year in which it first flowered at Minterne, in Dorsetshire.

L. FLAVA is a pretty late autumn-flowering kind, a native of Brazil. The pseudo-bulbs are rounded and bear erect spikes of flower about 18 inches in length from the apex. The flowers are wholly yellow and last well. Though introduced as far back as 1839, this kind is not common even now. It requires Cattleya house treatment and is easily grown. Another Mexican kind, somewhat similar to L. autumnalis, is

L. FURFURACEA, which was introduced from the neighbourhood of Oaxaca in 1838. The outdoor treatment after flowering suits this kind well, provided there is time, but it must not be left out after the middle of September. The colour of the flowers is deep rose, the lip purple in front with a white base.

L. PERRINI is a fine species in its best forms and well worth growing. This has the habit of a Cattleya and produces a four to six-flowered scape, the individual blossoms being from 5 inches to 6 inches across, light rose on the sepals and petals, the lip similar in ground colour with a deep purple blotch on the front lobe, the throat white, with a yellow marking. This species comes from Brazil and is very variable, the pure white form being much prized and very rare. H.

NOTES FROM A NEW ZEALAND GARDEN.

AN ECHINOPSIS.

FEBRUARY 16.—One cannot always have one's favourite flower in bloom unless, indeed, the favourite happens to be Primula obconica, when, with a little care, the thing might be managed. Speaking for myself, however, I am virtuously conscious of a catholic taste in plants, nothing that grows coming much amiss provided only it keeps within reasonable bounds, so that when I cannot have Daffodils I can put up, in default of better, with a Rose or something of that kind second best.

There is, fortunately, no lack of beautiful flowers to bridge the six months' interval between Daffodil and Daffodil. For the last three weeks the Romneya has been producing its exquisite poppies. I see that, like others of its tribe, it prefers the night season for bursting its chrysalis case and spreading its wings. If there is anything amongst flowers more exquisite than this, even amongst Daffodils, I should be glad to know it. By the way, it is noticeable that the Romneya does not appear in the list of plant names in Miller's dictionary. We call it here the Californian Poppy, to which name from its affinities it seems to have a good title. I see, however, that this English name is given by Miller to Eschscholtzia.

But the flower which stimulates me to dip my pen this morning is a Cactus, some kind of Echinopsis. I never meet a dealer in plants here who knows a Cereus from a prickly Pear, the Cactus, I suppose, not being a good trade commodity; so that I got this plant of mine with the vague information that it was "white flowered." It is, however, I think, Echinopsis Eyresi—at any rate an Echinopsis, and this morning I see it in flower for the first time. I grow a tolerably large and varied collection of Cactuses, but I confess that if I did not find great interest and beauty in their quaint form of growth and in the infinite variety of their spine arrangements, I should not see in their flowers sufficient inducement to grow them, this partly because many of the kinds—much the greater number, it seems to me—are so shy-flowering, and partly because the flowers when they appear are so evanescent. One of the most abiding impressions ever made upon me by a flower was that caused by seeing some years ago a Cereus in bloom in a Sydney garden. It was Cereus triangularis, I believe, and the plant was so large that it covered the outside of a garden bush-house. From day to day I watched the upright swelling bud-knobs, dotted here and there over the plant, like the cones on a Nordmann Pitch Pine. At last one evening, in the dusk, the great things opened. A ladder was brought and some of the blossoms were gathered. What their dimensions were exactly I did not ascertain, but the flowers were very large and splendid, soft cream-white in colour and exquisitely tasselled inside the cup.

The Echinopsis I have before me now has not such an imposing blossom as that of the Sydney Cereus, but it is still one of the most beautiful flowers I have ever seen. It presents in a marked degree that piquancy of contrast between exquisite flower and rough stem (if stem it be) that is characteristic of most Cactuses. Shapeless you cannot properly call the regularly ridged and spiny cushion that stands for the whole apparatus of stem, branches, and leaves, for it is mathematically exact in its ridges and valleys, which run north and south to the respective poles with a curvature as regular as the meridian lines on a globe. From the side of this globular hedgehog, apparently at haphazard, projects, at an angle of 45° or so, the cornucopia of the flower to a height of something over 5 inches. The stalk of the funnel is greenish white, dotted at intervals like ermine with tufts of dark hairs. The mouth of the flower is 3 inches across from petal tip to tip. The petals in three rows are white, faintly tinged with green like a Devoniensis Rose, and the whole is (in literal truth) a horn of plenty, for the inside is quite full of stamens encircling a conspicuous ten-rayed stigma, which rises in the centre, well above their reach, in silent protest, I suppose, against any attempt at self-fertilisation.

Echinocactus sinuatus, also in bloom with me, has not the great beauty of the Echinopsis I have just mentioned, but its straw-coloured satin flower, with a warm crimson stain at the base of the petals, is not to be despised. This Cactus has the merit of growing fast and flowering freely. My plant has been in bloom off and on for three months, as there are still three unopened buds that will take a month at least to come to perfection. E. sinuatus it was called by the American firm that sent it to me, but wrongly, I believe. If it is correctly named, then Mr. Watson, of Kew, is wrong in his description, which is not likely. A. WILSON.

Dunedin.

STONELANDS, SUSSEX.

It is pleasant to get out of the conventional in gardening, and there are many ways of effecting this. Generally gardens are cut off from all sympathy with the surrounding country—that is to say, the usual arrangement of our gardens is so stereotyped, that it is rare to find anything which is suggestive of the country and surroundings as gardens might well be. Among gardens we have seen in the southern country, this place is very characteristic of the woodland district of Sussex, and very pretty with its groups of Scotch Firs behind the house and in intimate connection with the farm buildings near. The house is pretty and of the best Sussex order—bright, sunny windows, pretty stone, big chimneys, simple, direct and right in all ways as regards the building.

As will be seen from the little engraving, there is a terrace, rendered necessary by the slope of the ground, the wall of which terrace also cuts off the house from the road to the farm buildings near. The effect near or far is very pretty. Stonelands is a fifteenth century house, of the history of which nothing can be gleaned. It is probably of about the same period as Wakehurst and other houses in the neighbourhood, and occupied by yeomen till of recent years, when it was purchased by Mr. Franks, repaired and in various ways much improved by him.



Stonelands (south side), Sussex. Engraved for The Garden *from a photograph.*

Books.

TRAITE DE CULTURE POTAGERE.*

This is an excellent little book, and deserves an English translation. The author is a member of the teaching staff of the Grignon National School of Agriculture. His style is simple and concise. The pleasure of growing one's own vegetables is one which scarcely any amount of partial failure can destroy. The amateur should feel consoled for repeated disappointments, since, according to this author, he is a powerful factor in the world of horticulture, because it often happens that failures through inexperience and imperfect knowledge only incite him to renewed attempts, until in the end he feels strong enough to forsake the beaten paths and strike out a way of his own among new and untried species. In this he has an advantage over the professional grower, who cannot afford to spend his time and capital except in undertakings known to be profitable to him. Thus, according to M. Dybowski, the amateur prepares the way for the professional, and so, without taking into account the benefit which he personally derives from the exercise of his intelligence and perseverance, the amateur's part in horticulture is an important one. Of the two classes of professionals—the market gardener and the cultivator—the former is the artist. His operations may be limited in area, but the scientific nature of his methods, the capital he invests, and the trained intelligence he devotes to his business place him in the first rank. For him the seasons do not exist; he is busy at all times in his garden, from which he sends out a continuous supply of fresh vegetables to our markets.

To all classes engaged in the cultivation of vegetables this book may be recommended. The different vegetables are treated in alphabetical order; their uses, varieties, mode or ways of culture are then described in a lucid manner, and the student is greatly assisted by the numerous excellent engravings with which (through the kindness of MM. Vilmorin) the author enhances the practical value of his book. We take the following chapter, page 148, on

Wild Chicory.

Wild Chicory (Cichorium Intybus) is found growing wild in France as well as in England.

Uses.—Cultivation has singularly modified the characteristics of the plant. The leaves, whilst increasing in size, have become less hairy and their bitter flavour, too, has diminished. With these modifications the plant lends itself to a variety of uses for cooking. In a young state it is eaten raw as a salad, and one way of preparing it is to cover it over with earth in order to blanch the leaves as they grow; but, as a rule, this blanched appearance is got by growing the plants in cellars, and it is generally after having undergone this process that it reaches the consumer.

Varieties.

Besides the type several distinct varieties are cultivated.

Variegated wild Chicory.—The leaves of this variety are much spotted with red. It is used for obtaining the Barbe de Capucin, and the red stains remain on parts in spite of the blanching process which the plant has undergone.

Improved wild Chicory. — This variety is characterised by the breadth of its leaves, which

* "Traité de Culture Potagère (Petite et Grande Culture)." By J. Dybowski. Illustrated with 113 engravings; 2nd edition. G. Masson, 120, Boulevard Saint-Germain, Paris.

by their undulating and crisp appearance impart to it the semblance of a Lettuce.

The wild large-rooted Chicory, or Coffee Chicory.—This variety, the tap roots of which attain to a very large size, is used, as its name implies, in the preparation of coffee, in which state it is widely consumed. Its leaves also are used in the production of Barbe de Capucin. There are two types of the plant, viz. :—

The large-rooted Brussels Chicory or Witloof Chicory.—This plant, which resembles the Magdeburg Chicory, has this in particular, that the leaves form a heart which imparts to it something of the appearance of a small-sized Lettuce. At a later stage we will describe the method of cultivation employed in respect to this variety.

Barbe de Capucin.—The cultivation of wild Chicory for Barbe de Capucin is limited to the neighbourhood of Paris, the communes of Montreuil-sur-Seine, Rosny and Bobigny. Cultivators who devote their energies to its production rarely sow Chicory on their own lands, one reason of this being that oftentimes they do not possess the requisite amount of space, but chiefly it is owing to the exhausting effect of this cultivation which makes it impracticable to employ the same plot of ground for two consecutive years. The ground which is set apart for this purpose is limited to one crop, that is to say, from spring until the end of autumn. A plot is given over to the cultivator in April and is manured, ploughed over, and then harrowed. The lease of each plot ceases in November or December. The price of each tenancy varies very little, ground which is set apart to this crop being always of good quality, and the average price is 750 francs the hectare.

Sowing.

The ground having been properly prepared, the seeds are sown at the end of April or beginning of May. They are sown in lines in order to enable the ground to be kept clean, which is done all through the summer. The lines are 0·30m. apart and the quantity of seed which is required per hectare is about 150 litres, at an average price of 1 franc the litre. The sowing, which is done by hand, employs one man from nine to ten days. In operations on a large scale it is better to sow with a drill. Shortly after the appearance of the young plants, which generally takes place eight or ten days after sowing, it is advisable to hoe between the lines, which means eleven days' labour for one man. A month afterwards it is necessary to get rid of the weeds which may have made their appearance between the lines, or it may be in the lines themselves among the roots of the young Chicory. This weeding, which is done by hand, occupies one man about fifty days if it is properly done. The leaves when they have attained to a considerable development are either gathered by hand and sold as young Chicory for salad, or they are reaped with the scythe as food for cattle. This latter as a supplementary crop is sometimes not to be despised.

Lifting the Plants.

At length comes the time of blanching, an operation which necessitates constant care throughout. The first step is the lifting of the plants. This is done either with the spade or by means of a flat-pronged fork. Having loosened the earth by means of either tool, the plants are easily lifted by laying hold of the leaves that remain. This is either done from time to time as the plants are required for consumption, or all at once, in which latter case the roots are placed in a basket close to the place where it is intended to make use of them. In any case it is a long and costly operation. It takes one man not less than a day and a-half to clear 4 poles of Chicory, since he has to tie the roots with willow into small bundles. In this way about 1350 bundles per hectare are obtained, and these, so soon as the lifting is over, are conveyed to the place where the forcing is done. At Montreuil, cultivators who have not their own means of transport are accustomed to employ carriers at the rate of 12 francs for each fifty bundles. When the bundles have reached their destination near the blanching places, the next step is to trim the roots, and this is done by taking each plant separately and nipping off all the leaves which still remain with the finger and thumb, as the use of a knife might injure the heart or centre, and thereby retard the appearance of leaves. This work is usually done by women and is paid for at the rate of 1 franc the bundle. After each bundle is made up it is again tied with willow in such a way that the plant tops are level with one another.

Forcing.

This takes place in a cellar or store-room, the apertures of which have all been closely sealed, and upon the floor of which a bed has been made, covering it wholly or in part, according to requirements. The bed ought to be of fresh stable manure and have a depth of 0·30m. to 0·35m. When, after having been carefully pressed down and watered, the bed has attained to a fixed temperature of about 20° to 25°, the bundles of Chicory are placed side by side upon its surface and as close together as possible, with a view to economy of space. Some producers fill up the spaces between the bundles with smaller bundles. It is seldom that the beds are completely covered the same day, and, in fact, the custom is to commence one side and follow up with the others, in order that all the plants may not reach maturity at one and the same time. When all the Chicory is bedded, care is taken to close every door and stop up every aperture, in order to prevent the least ray of light from penetrating to the plants, as that would have the effect of "greening" the leaves. As soon as it is placed on the bed the Chicory begins to sprout with such rapidity, that one may, so to speak, almost see the sprouts coming. At the end of eleven days, if the bed is hot enough, the leaves will have attained a length of about 0·30m. Whilst the forcing is going on care will be taken to water the plants once or twice a day, having regard to the heat of the bed, and only perfectly pure water should be used, as the least impurity would induce rottenness in the leaves.

Preparation for the market.—As soon as the leaves have attained the length above mentioned the forcing process is at an end. The bundles are then removed from the cellar with great care, so as not to break the leaves, and are then untied. A small handful of the plants is then spread on a table, and on the roots is placed a layer of damp potter's clay of about half the size of one's fist, and upon it another layer of Chicory is spread. Thus is constituted the bottillon, which is tied round the roots with a slender band of Willow and placed among others in large baskets large enough to hold about 200 bottillons. Care will have been taken to line each basket with linen and to keep it covered, so as to avoid bruising the leaves and in order to exclude the light, as the least ray of light easily turns them green. So prepared, the baskets are despatched to the markets. Here, again, growers who have no means of transport of their own have recourse to carriers who, at Montreuil, charge at the rate of 5 francs for every four or five baskets. To the cost of carriage must be added the half-days of the salesman, amounting to 3 francs, which makes the cost of delivering 800 to 1000 bottillons about 8 francs.

The yield per hectare.—Such are the operations and the cost of cultivation, forcing and delivery. It is easy, therefore, to calculate the yield per hectare. Our computation is that in an average year it amounts to 1350 bundles, giving after the forcing 50 bottillons the bundle, or a total of 67,500 bottillons. These are sold in the Paris markets at prices which vary according to the severity of the winter and the competition they meet with from other salad stuffs. In years when the sale of Chicory is quiet it is sold at the rate of 8 francs to 12 francs the hundred bottillons. On the other hand, in years when the demand is great this price is doubled. From these facts we may set the minimum price down as 12 francs the hundred bottillons.

The expenses of cultivation, &c.—This may be calculated per hectare as follows, it being remembered that the price of a day's labour of one man is 6 francs at Montreuil.

The hire of 1 hectare of ground, ploughing, manure, &c.	750	francs.
150 litres of seed at 1 fr.	150	,,
Sowing, 10 days' labour of one man at 6 frs.	60	,,
Hoeing, 12 days at 6 frs.	72	,,
Weeding, 50 days ,, ...	300	,,
Harvesting, 150 days ,, ...	900	,,
Transport of bundles at the rate 5 frs. per 50, on a total 1350 bundles	324	,,
Cleaning, at 1 fr. the bundle ...	1350	,,
16 mètres of manure for forcing, at 5 frs.	80	,,
Willow for tying bundles and bottillons	40	,,
4 mètres of cubes potter's clay .	20	,,
Carriage to market, 1 fr. for the 100 bottillons	670	,,
Total	4716	francs.

Profits.—Roughly speaking, the profit from 1350 bundles the hectare and fifty bottillons the bundle, or a total of 67,500 bottillons, at the rate of 12 francs the 100, may be set down as 8100 francs. If from this sum we deduct the expenses, the net profit per hectare will be 3384 francs. All the above details have been furnished us by M. Clement Guyot, cultivator, of Montreuil-sous-Bois (Seine). The figures may vary much accordingly as the work is done with more or less care, and the fact is that under different conditions, the totals above given may be very appreciably diminished. Another grower in the same locality puts the yield per hectare as not more than 36,000 bottillons. It is true that in his case the expenses of cultivation are much less, their total not being above 3270 francs. Consequently under like conditions the profit is not above 1050 francs on the same calculation of an average of 12 francs the 100 bundles. The daily consumption in Paris alone is about 80,000 bundles of 50 bottillons during the winter.

In the production of Barbe de Capucin, the large-rooted Chicory is used as well as the wild Chicory proper.

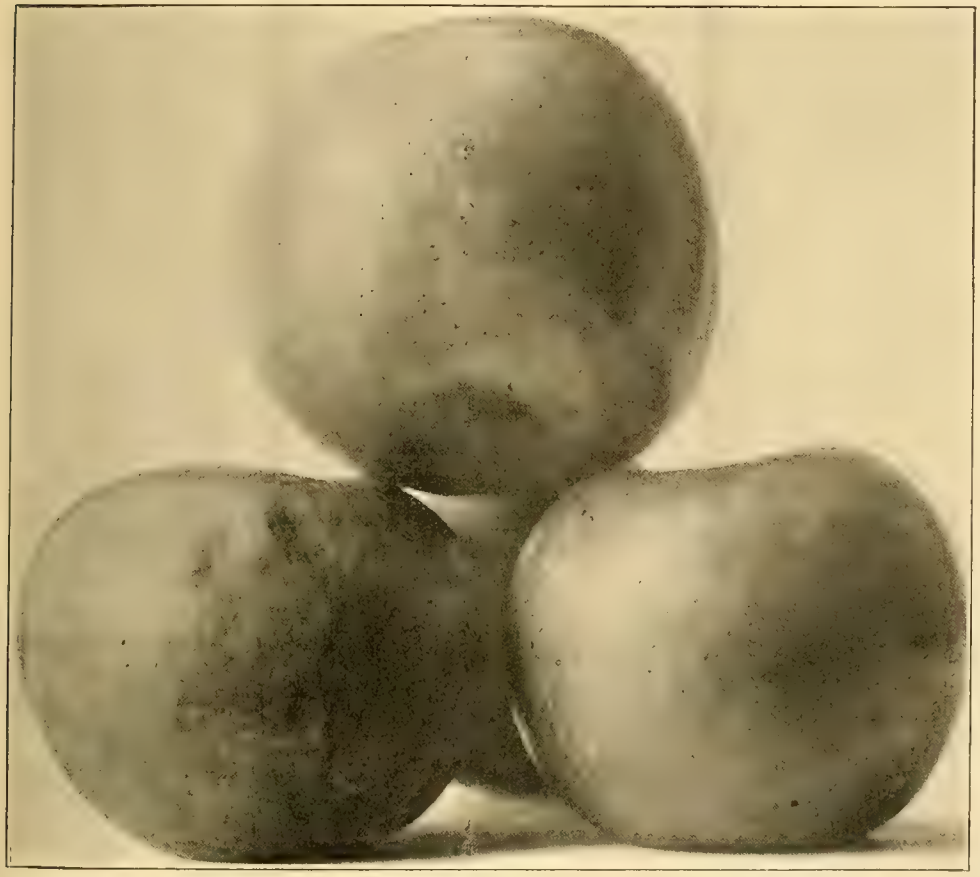
The cultivation of Chicory for cutting.—A practice which is carried on more or less continuously in kitchen gardens, as well as by cultivators for the markets, consists in sowing Chicory in March, sometimes in rows 0·25m. to 0·30m. apart and sometimes broadcast. Weeding and hoeing go on during the summer when the leaves are cut for the consumer, and in winter the ground is cleared to the extent of removing the dead leaves. In February and March the Chicory is covered over with leaf-mould or with mould simply when the seeds have been set in lines. The thickness of the cover ought to be at least from 2 inches to 3½ inches. At the end of two or three weeks the Chicory will make its appearance, and then is the time to gather the leaves. The plants are laid bare and the leaves are cut, but avoid removing the heart, which is covered up anew. Thus two or three crops may be had in the spring of a salad which is perceptibly bitter, but is generally liked. The same operation may take place in the following year with the same plants, after which they should be rooted up. The varieties which are found successful in producing Barbe de Capucin may also be used for this purpose, but in any case it should be with the addition of the improved Chicory.

The cultivation of Witloof.—This is a vegetable much used in Belgium, and promises to have an equal popularity in France. Its cultivation, however, is attended with difficulties, not in the manner of growing it, but owing to the difficulty there is in obtaining seed which is absolutely pure and carefully selected. The result of cultivating an inferior kind is to produce a vegetable resembling Barbe de Capucin, a variety which is wanting in stability and has a tendency to go back to the type. So far the results obtained in France have not been so successful as those which come to us from Belgium. The sow-

ing is done as in the case of the wild Chicory. In the autumn the roots are pulled up in the prescribed manner, and choice is made of all those the diameter of which is at least 3 or 4 centimètres in the upper part; all others are cast aside, as well as those which instead of only one centre shoot have several. The selected roots are trimmed as in the case of the Barbe, and then they may be dealt with in two different ways. One way consists in adopting the same system of forcing as is applied to the Barbe in the manner described above. The other consists in first reducing the roots to an equal length of 0·20m. to 0·25m. by cutting off the thin ends. This done, a trench is made 0·40m. in depth in which the roots are placed upright side by side, the spaces between being filled with earth and the trench filled up again. In this way the plant is covered with a depth of earth of about 0·20m. Where it is desired to force the growth, the surface of the trench is covered with a warm layer of horse manure, varying in depth according to the quickness of growth required. With a layer 0·50m. deep, it will take on an average a month in February to give us a vegetable fit for the table. The roots having been withdrawn from the trench, the leaves are detached, and either eaten raw as a salad or cooked.

Cultivation in beds.—Sometimes the wild Chicory or its variegated variety is sown in beds and under frames. If so, the sowing is done from January to March. For that purpose a bed is formed 0·40m. in thickness, which, after being dressed with mould, is enclosed in a frame. The sowing is done broadcast, without lines; water is then sprinkled on the bed, which is afterwards covered with straw matting. The seed germinates in two or three days, and fifteen days afterwards the young Chicory is ripe for cutting and being eaten as salad. It will furnish two or three cuttings, after which the roots are pulled up and thrown aside. After this first crop a second may be grown on the same bed after turning up in order to renew the heat. It is better to make two successive sowings rather than cut too long from the same plants, since the older these are allowed to grow, the harder and more bitter the leaves will become.

The seed of the wild Chicory retains its germinative power for six or seven years. It is got from plants sown in the spring and which have stood the winter in the open air. For obtaining the improved varieties and for Witloof Chicory, the best plants should be selected and replanted at 0·30m. in the spring of the second year.



Apple Newtown Pippin. From a photograph sent by Mr. H. Hendricks, Kingston, New York.

THE KEW HERBACEOUS CATALOGUE.*

In this handy shilling volume we find arranged in alphabetical order a catalogue of about 6000 kinds of herbaceous, alpine and bulbous plants which are cultivated in the open air in the Royal Gardens at Kew. In the first place such a list is a record of which the managers of Kew may fairly pride themselves. The soil of that part of the Thames valley is not very good for most herbaceous plants, but it is in the rock garden that the difficulties to be encountered are the greatest. Instead of the pure and light air of a mountain side, where the atmosphere is in summer often saturated with healthy moisture, and evaporation from the soil—a condition hateful to most alpine plants—is hardly perceptible, and where in winter the plants rest for several months preserved in a constant temperature by a covering of snow—instead of this we have at Kew an atmosphere within the baneful influence of smoke-laden fogs, a climate where the plants are all through winter liable to be excited into premature growth by spring temperature, again to be checked by the parching east winds of March, which carry, in addition to their own withering powers, a load of impurities gathered as they pass over London. It is but fair that these disadvantages should be borne in mind, and that those who know how difficult it is to grow alpines in any lowland situation will appreciate the success with which so large a collection is maintained in the gardens at Kew.

The plan of the catalogue should be briefly noticed. The names of the plants are arranged in four rows. That which begins nearest to the left hand margin of the page contains in full the generic name of the plant, followed by that of the first species. In the next row from the left are the rest of the same genus. In the third row are well-known botanical varieties classed under the species to which they belong, whilst in the fourth are added in a few cases synonyms. If all the synonyms were added the volume would be three or four times as large as it is, and would be very confusing. The few which are given are in cases where the priority of name is in dispute. The specific names of all the plants are followed by the abbreviated names of the botanists who first described them and of the country of which each kind is a native.

It is to be hoped that all who cultivate hardy plants will avail themselves of this volume, by which the naming of their plants may be made uniform, the spelling correct, and the mode of writing the specific name, whether with a capital letter or not, may conform to a regular rule. Let every name by which a plant is known in a nursery or a private collection be verified by this list. If it does not occur in the list, the chances are twenty to one that it is wrong, and in this way we may hope in time to eliminate the very large number of unauthorised names now prevalent.

Attention may also be called to the account given in the preface to the catalogue of the way in which this large collection has been got together, and it is hoped that all who have rare plants to spare will help to maintain and enlarge this finest show of living plants in the world.

Edge Hall, Malpas. C. Wolley-Dod.

* "Hand List of Herbaceous Plants Cultivated in the Royal Gardens, Kew." The Royal Gardens, Kew.

Orchard and Fruit Garden.

THE NEWTOWN PIPPIN.

This still stands at the head of all American Apples in flavour and quality. We read of your famous Blenheim, Cox's Orange, and Ribston Pippin, and your correspondent "W. G. C.," who in December last had been comparing our Newtown with some of those choice English Apples, said, "In justice to the Newtown Pippin it must be said that it was of excellent quality, only slightly behind Cox's Orange, Ribston Pippin, and one or two other highly flavoured varieties grown in this country." I do not like this conclusion, and therefore I believe it is unjust, although I frankly confess that no such opportunity for comparative test was ever presented to me. But in any event I want to protest against the statement that our American Newtown is "slightly behind" any other Apple for flavour and quality in general. Of course, I realise what a wide diversity of tastes and opinions there are regarding the ideal flavour of an Apple, nor do I believe it possible to settle upon any standard. But in this case, assuming that the writer had carefully selected and well-grown specimens of the Newtown for his test, allow me to say that at that early stage of the winter our Newtown could not have reached its full flavour. It is rarely before the latter part of January or 1st of February, in this latitude, that its rich, sprightly juices are fully ready to delight the palate most.

It is distinctly a late winter Apple here and a very long keeper, coming in when nearly all other Apples are gone ; and this is another important element of its great value.

Last October I purchased a barrel of the finest Newtowns I ever saw or heard of from an honest old farmer who grew them about ten miles from this city. I have raised many fine ones in past years, but nothing to equal these. Every Apple was sound, well coloured, fair, smooth, and beautiful, fit for the show table. Two dollars was all he asked for this barrel of Apples, and I paid him with pleasure. I kept the fruit headed up in an ordinary cold room, with the usual fluctuation in temperature, a part of the time at freezing point, until February, I think. But then when I opened that barrel there were indeed a sight and an aroma fit for the enjoyment of pomological savants, and I wish President Berckmanns, of the American Pomological Society, "W. G. C.," and other friends of that ilk could have been there to see, smell, and taste. Every specimen sound and beautiful, and the flavour beyond compare in my estimation. From that time to this (June 15) I have been enjoying this fruit. And now, when all other Apples have disappeared from the markets, I have yet two or three dozen of these magnificent fruits, sound as a dollar, though the mercury has been simmering in the nineties for days together. I herewith present an accurate outline of one of these Apples, an average specimen, and also a photograph of three other average specimens, which are shown slightly under the actual size.

You will observe that these specimens are much larger than the typical outlines of the Newtown shown in "Downing" and other standard pomological works. Does this look as though the Newtown Pippin had deteriorated very badly in this country in recent years, as we have been led to believe by various writers? Now, the grower of these Apples is a plain, modest farmer who has never heard that the Newtown was a poor, unprofitable Apple to grow. He does not read the horticultural papers very much, and does not farm on the most approved scientific principles. All this is pretty clear in view of the fact that he sold such magnificent Apples of this choice variety at such a low price, which was only a few cents more than other standard sorts were bringing at the time. He has several Newtown trees in his orchard here in the shadow of the Catskill Mountains, planted on rather high ground, and they get the same general treatment which is given to his entire orchard ; he just lets them bear fruit like the other trees. That is all. But I am going to tell him that he can just as well get more money for such Apples in future, because he ought to know it, and then I somehow feel as though I owed him something. Why, when I opened those Apples every one was worth five cents in the fancy fruit markets here, and the larger ones would have sold for ten cents each from the New York stands. Twenty-five dollars would have been a small price for that barrel of Apples.

Does it not pay then to grow the Newtown? But you say, these were very carefully sorted, and I agree that they must have been ; it always pays to sort fruit carefully. But granting all that, this man had plenty more like it ; mine was only a sample of his entire crop.

Now I believe the Newtown has been and continues to be very unjustly condemned as an unprofitable market Apple in this country, though it is starred in fifteen of our States, and double-starred in three of them, in the American Pomological Society's catalogue. That the tree is a rather slow grower and shy bearer while young I admit, but when it begins to bear it continues to produce its precious load and is fully as productive as other leading sorts. It is an ironclad in vigour in the severest climate and is not subject to disease. Therefore I claim, because of the superior value of the fruit, it amply repays for the extra year or two required for its maturity. All this I have said before in previous issues of The Garden, and subsequent experience and observation have fully confirmed it. I can point to several comparatively young orchards of the Newtown here on the bank of the Hudson River in the suburbs of this city which are not equalled anywhere in vigour, productiveness, and value of their crops. From one of these fine orchards Apples are annually sent to the royal table of Her gracious and excellent Majesty the Queen, and I am proud to know that she has the best.

For nine months ending September 1, 1894, Great Britain is said to have paid us about 2,500,000 dols. for American Apples. During the past year we have shipped you nearly 1,500,000 barrels of our Apples. I wish it were possible to know just how many of these were genuine Newtowns and how many more were sold as such. If you have choice English Apples that are really superior to our Newtowns, why is it that none of them are ever imported or sent to this country, where we usually try to "get the best?"

Kingston, N.Y. H. Hendricks.

Pears and Apples.—The same treatment cannot be given these fruits as advised for other wall trees, as if the knife is used too early it does not promote fruiting wood, but a mass of weak leafy wood. Leaders should be secured to the wall and weak useless wood cut out. Leave any shortening of terminals till later on when the wood is more matured. On some Pears, such as Louise Bonne of Jersey and other smaller kinds, heavy crops have set and thinning of fruits is necessary ; other kinds with a sparse crop are making much growth, and in their case the removal of breast wood will be necessary. Cordon trees should be kept well stopped, the terminal growth secured, and the crop where heavy thinned, as after the middle of this month there is little danger of dropping. The early kinds, such as Doyenné d'Ete and Jargonelle, should be thinned earlier. The trees should be well mulched and ample moisture given them, with occasional dampings over after hot days. Much the same remarks apply to bush trees of both Apples and Pears as to thinning, mulching and watering. Pyramids and bush trees may have gross top growth reduced, but it is well to keep the wood thin in preference to shortening it much at this season.—G. W.

Summer pruning.—I have often thought that much harm is done to valuable fruit trees on walls and espaliers by removing the whole of the breast wood at one time. This always has been and is still the rule in most gardens. If, however, it is necessary to remove the young shoots from a Peach or Nectarine tree piecemeal in order to avoid a sudden check, the same rule must, I think, hold good in the matter of summer pruning. In fact, I have frequently noticed that the fruit on Pears which was swelling freely up to the time of removing the foreright shoots became stationary for a considerable time after the operation. Far better would it be in my opinion to go over the trees, removing one half the shoots more from the top half than the bottom, completing the work in ten days or a fortnight's time. I am confident that some of the more delicate Pears and Plums also resent this wholesale defoliation in a most marked manner, the fruit never afterwards attaining to its normal size or developing its best flavour. I will go further and say that it would be wise not to allow varieties which are prone to make much wood to have their own way in spring, practising pinching as in the case of pot trees and trees generally grown under glass. Thus sun and air would be able to act beneficially on each shoot and leaf, a thing impossible under the crowding system, and as the more wood a tree makes the more it is inclined to, this early pinching would lessen the liability to grossness and secure a more evenly balanced condition of the tree generally. Many young fruit trees are undoubtedly stunted and never permitted to attain their full dimensions by this unnatural raid on their constitutions from the very time they are planted.—J. C.

Preparing Strawberry plants.—In this neighbourhood Strawberries are largely grown, both in the open and under glass. The method of raising young plants that finds the most favour is that of layering them in the open ground as early as possible. Not only is the small pot system of layering Strawberries expensive, but the plants so raised do not take so readily to their altered condition as when lifted direct from the open ground. Directly runners can be obtained the soil underneath them is loosened 1 inch or so deep to ensure a quick root action. A slight hollow is made in the soil to assist in giving the runners water at first when they are layered. The layers are made fast to the soil by the aid of a peg pushed into the ground immediately behind the runner. In a few weeks the roots will have pushed sufficiently far to enable the plants to be lifted with some soil attached, so that when planted either in the open or in pots the check of removal is not felt. The roots run quickly away in the fresh quarters, owing to their not being entwined around each other as when the plants are in pots.—E. M.

SOME GOOD CHERRIES.

The season has not been all one could desire for Cherries, black fly having been troublesome, but there is no cracking, which is often the case in wet seasons. In no season have Cherries been more plentiful or better. I recently paid a visit to Gunnersbury House, and there I saw the finest Cherries I have ever seen in the open. They were equal to the best fruits grown under glass. Mr. Hudson showed them before the fruit committee of the Royal Horticultural Society on July 9, and was unanimously awarded a silver medal for them. The trees from which the fruits had been gathered were very old, and a few seasons ago suffered so badly from canker that Mr. Hudson feared he would lose them. To try and bring them round he laid in all the young growths at full length except the foreright shoots, with the result that the trees now are a mass of young fruiting wood ; the old, somewhat unsightly branches are well covered over and there is a wealth of fruit, thus showing the advantage of giving trees more freedom, using the knife less and getting young wood. Of course, from orchard house trees one can expect first-class fruit, but in the open such finish cannot be expected. I am aware young trees are not to be relied upon in the open for extra large fruit.

When I exhibited Cherries some fifteen years ago I always relied upon one old tree with a few branches. This tree was near a manure tank and got food freely, but I am not aware Mr. Hudson's trees got any special food, and they had got none too much moisture, water being scarce and difficult to get at. The trees named on a west and south-west wall are very clean and free from insects. The varieties are Black Tartarian, Bigarreau de Schreken, and Bigarreau Napoleon. There were other varieties, but not such old trees. I do not think anyone who takes an interest in fruit culture can make any mistake in planting the above varieties. B. Napoleon is a later fruit, but in such seasons as this it is ripe by the first week in July on a very warm wall and in light soil. In my opinion it is the very best late Bigarreau. The Black Tartarian is generally considered one of the best black varieties for growing in a cool house. The other variety, Bigarreau de Schreken, which may be termed a very fine type of Early Bigarreau, is black and with a great

depth of flesh, very rich and juicy. It does well either indoors or out.

I find the above varieties do well in this locality, and I will add one or two more which I value quite as much for quality, cropping, and earliness. Early Rivers, a large black fruit, is a splendid variety, also Governor Wood, a most reliable variety. St. Margaret, a large dark purple, is very fine and crops grandly. To these should be added Frogmore Bigarreau, Empress Eugénie, Elton, and Waterloo. These are all grown on walls and never fail to crop freely; indeed, this season severe thinning was necessary. G. Wythes.

Syon House Gardens.

Strawberry British Queen.—I never remember a season when the above variety has done so well and the flavour been so good. Many fail with this variety through leaving the plants too long in one place. There are none which repay annual planting better than British Queen. It is useless to plant weak runners. If a few plants are reserved for runner production, not fruiting them and planting the runners early in deeply-dug well-manured land, this old favourite will give a good return. I do not advise north borders where the land is heavy, but in light soils and a sheltered garden a north border suits the plants.—S. H. B.

Strawberry Aberdeen Favourite.—In the race for new or large kinds we must not forget those which do well in what may be termed adverse soils. The above is one of the very best croppers I have grown. Not only is the fruit freely produced, but it has that rich vinous flavour often found lacking in these fruits. This variety is much grown in the north, and is valuable, as it prolongs the season. It does well in most soils; in fact, I have never seen it fail in any locality, and the fruits being firm travel grandly. The fruit is bright red, conical, and of first-rate quality. With me it is in season after British Queen. Being a strong grower it requires ample space. The plants should not be allowed to bear more than two crops if fine fruits are desired. It is not grown in this part of the country so much as it deserves, but in my estimation it is much superior to Sir J. Paxton and others more often seen.—G. Wythes.

Currant La Conde.—In his useful notes on Currants at p. 6 "W. G. C." mentions this variety, but does not speak of La Versailles. The latter variety I have grown for many years and find nothing to approach it either for cropping or quality. The fruit is produced in very large bunches, the individual berries being sometimes as large as small Cherries. I am wondering whether La Conde and La Versailles are identical, as "W. G. C.'s" description of the former would seem to indicate. La Versailles is by no means a uniform grower, being somewhat ungainly, but on this account may be easily layered in early spring, good rooted plants being thus obtained by the next autumn.—J. Crawford.

Melon roots diseased.—I send you a piece of a root of a Melon. Whenever the Melons begin to net, the plants always flag on hot days. I keep the house at 70° by night. I grow Cucumbers and Tomatoes in the same house. I never water within 4 inches of the stem.—J. P.

*** The Melon roots are badly attacked by a small worm, which was doubtless introduced with the soil. You keep your house at the proper temperature, but doubtless to a great extent the trouble is caused by the Cucumbers, these being more liable to this disease than Melons. In your note you state it causes dropping of foliage on hot days. This is simply from want of roots to support the plants. Can you not devote a separate bed to the Melons and thus prevent contamination, as it is impossible to do both plants justice quite close to each other? Again, you grow Tomatoes in the same house. This is not advisable, as I fail to see how justice can be done to these last-named, as they require more air, less moisture, and in a close, steamy atmosphere would make much leaf growth and fruit very sparingly. The only remedy is when the crop is cleared to thoroughly clean out the old bed, burn the soil, or mix a quantity of fresh lime and soot before using it in any way. I would advise you to obtain soil from a new source, thoroughly exposing it to frost before using, and mixing with it some wood ashes, soot, or old lime rubble before placing indoors.—G. W.

NOTES FROM WORTHING.

Worthing has long been noted as a great Tomato and Grape-growing centre, and having recently gone to reside there, it has occurred to me that a brief account of the now extensive fruit-growing industry carried on in and around the town might be of interest to many readers of The Garden. The extent of glass in the neighbourhood is very large and would surprise anyone unacquainted with the place; indeed, I know of no other spot, even in Kent or near London, where so much glass can be found within a limited area. The nearest approach to it is, I should say, at Bexley Heath, or Swanley, in Kent, where Mr. Ladds' huge market and fruit-growing nursery is situated. Though none of the Worthing establishments equal this in extent, there are many growers possessing from 500 feet to 5000 feet run of spacious glass structures within a short distance of each other, even in and near the town itself; while in the surrounding hamlets of Tanning, Broadwater, Patching, Lancing, &c., large nurseries devoted to fruit growing—chiefly under glass—are also very numerous. The Worthing growers, indeed, must be counted by the score, and more houses are being erected almost daily.

Now why so extensive an industry should have become established here and have grown to such large proportions is a question that may fairly be asked. As far as I can see, there are two reasons: first, the climate is unusually sunny, dry and warm, with a remarkable absence of storms, plenty of fresh sea air, and no fog, except a slight sea mist at times. In a season like the present, indeed, a little more moisture would be desirable, for there has been less rain here than almost anywhere else, so that an abundant supply of water is an absolute necessity. The soil also—a substantial, but not heavy loam of a rich yellow or reddish colour, and in many places 3 feet to 5 feet in depth—is admirably adapted to the growth of plants in general, and of Vines and Cucumbers in particular. I fancy it contains rather too much iron to be quite the thing for Tomatoes, but as it varies considerably, this crop also succeeds admirably in certain spots. Secondly, it appears that in the good old times Tomatoes were found to succeed so well in the open air, that some of the inhabitants commenced their culture on a rather large scale, and for some years with great success and profit. But when the cycle of wet summers set in this was given up, and the disappointed growers then began erecting glass houses to shelter the plants, and have since added to this accommodation very largely. Both

Grapes and Cucumbers

are also largely cultivated, and with marvellous success and a considerable amount of profit also, though the low prices now obtainable have rendered it necessary for growers to greatly extend their accommodation and output in order to make the same amount of return. Grapes in particular are wonderfully well grown and enormous crops often obtained. Black Hamburgh is the general favourite, with a few Alicantes here and there, but Gros Colman is now being cultivated to some extent. I have never seen such grand samples of this variety as some of the Worthing growers turn out by the ton. The fruit is not only exceptionally large in both bunch and berry, but the flavour is really delicious and infinitely superior to the poor, insipid, watery Grapes too often met with, this being due no doubt to the rich ferruginous soil and almost unlimited sunshine. One of the best growers told me recently that he could grow Grapes profitably at as low as 6d. per lb., but this is possible only by utilising the houses for forcing Roses in pots during the winter and spring and by growing Chrysanthemums in the autumn, both for cut bloom of course. Cucumbers, again, are grown remarkably well and owing to the glorious climate (the sun being often fully as strong in February as it is in April near London), the plants may be raised, planted, and cut from at any season with almost equally good results—barring, of course, the extra cost of firing in severe weather and the slightly diminished crop. Very little bottom heat is employed, one 4-inch pipe, covered with brickbats, in the bottom of each 4-feet bed, sufficing for even the earliest crops, and during the summer no artificial heat whatever is employed. A neighbour has been cutting continuously from one house between 200 feet and 300 feet in length since Christmas last until now, often 100 or 150 dozen of fine fruits weekly, and the plants are still full of vigour. Red-spider, thrips, &c., are almost unknown.

Tomatoes

also are very largely cultivated. As many as 40 or 50 tons of ripe fruit are often despatched from Worthing station per week during the summer months to London and elsewhere, and more than one of the larger growers sends away a ton or more of fruit twice, and occasionally three times a week at this season. The variety chiefly cultivated is a selection from the old Large Red, known locally as the Worthing Red, but here and there a large batch of Early Ruby, Perfection, or some other variety may be found. The Worthing Red is a dwarf and sturdy grower, setting very freely, and producing numerous large trusses of fruit, which, however, are usually more or less corrugated, the colour also being by no means first-rate. Some of the more carefully selected strains produce fairly smooth fruit, but in most cases it is decidedly coarse. Being a hardy and sure-setting variety, even in the depth of winter, it is, however, preferred by most of the growers to any other, but it does not realise the best price. A few years ago, when the rage for Tomatoes first set in and there were fewer growers, good prices were obtained. That troublesome disease known as the "flag" or "droop" causes some growers a great deal of anxiety and loss, one large grower having had an almost total failure from this cause for the last two or three years. In other nurseries it seldom if ever appears, but in others again it affects Tomatoes only when planted out, not those in pots. Its obscure character renders this complaint one of the most difficult to deal with, but I am inclined to attribute it chiefly to an excessive amount of iron in either the soil or the water employed. The disease known as mildew (Cladisporium) is also very destructive at times, generally appearing in July or August, particularly when the weather is damp and close. It is probable that if the Worthing growers provided their houses with better means of ventilation they would experience less trouble from this cause. The Potato disease, or "black stripe" as it is termed by some, also causes some amount of loss among all classes of growers. This is, as a rule, more common and destructive in a moist close season than at any other time, but even in a summer like this, when no rain to speak of has fallen for several months, I notice that a plant here and there becomes attacked. These are at once pulled out and burnt in order to prevent, as far as possible, the affection spreading any further. Almost the only

Flowering Plants

that are cultivated in the Worthing nurseries are Chrysanthemums, Arum Lilies and Roses. These come in admirably as catch crops, and by bringing in money, more or less in dull or off times, with little or no extra expense or trouble, add materially to the profits. Chrysanthemums are principally grown in pots and housed and bloomed in vineries and Tomato houses after the fruit is over. The climate is so mild, at any rate up to about Christmas, that little or no heat is required even for the late varieties. Those most commonly grown

are Lady Lawrence, W. H. Lincoln, Sunflower, Source d'Or and to a smaller extent L. Canning (a grand late white), Mrs. G. Rundle, Mrs. Dixon and Mme. Desgrange. A few years ago late Chrysanthemums paid well, but lately the market has been so glutted with blooms even at Christmas that they have become a perfect drug, and scarcely saleable at any price the last season or two, and early varieties are now the more remunerative. Roses are forced in early vineries and Cucumber houses and often realise good prices. The plants are chiefly grown in large pots, which are turned out-of-doors as soon as the bloom is off, repotted some time during the summer and brought in again when the houses are started in the winter or early spring. The varieties chiefly grown are Catherine Mermet, an old variety very similar to this called Clothilde, of which, though not quite so fine, the blooms are much more abundantly produced. Niphetos and a few Perle des Jardins, &c., are also found in smaller numbers. Maréchal Niel is not much grown, as it is of no use as a pot plant, and the growers do not care to occupy their roof space with such things.

Arum Lilies succeed wonderfully here, and even under decidedly rough treatment produce a profusion of fine foliage and large blossoms almost continuously, but the price is now so low as to be scarcely remunerative. The double scarlet zonal Raspail again is grown in some nurseries for winter blooming with considerable success, but as a rule the plants are very roughly treated and do not get a chance to show their true character.

B. C. R.

CHERRIES.

The enormous crops of these that have been grown this season both on standards and walls will no doubt convince most people that a severe winter has little or no effect on most of our hardy fruit trees. Though some varieties that are somewhat tender and those growing in unfavourable situations may be injured by the frosts, those making firm wood do not often suffer much. Many were complaining that owing to the cold wet summer the wood could not ripen, therefore fruit would be scarce. This, however, is not the case, and with the exception of Plums and Damsons growing in the open, most of the hardy fruit trees are well laden. Cherries and Apples are the most abundant crops on record. The trees, too, of the former have not suffered so much from the attacks of aphides as in some seasons; on that account the foliage is clean and healthy, many of the varieties having produced fruit of good size and fine flavour. With me Early Rivers was the first to ripen its fruit, and though the spring was a late one, splendid dishes were gathered from trees on a south wall the second week in June. This fine early variety deserves to be better known, for the fruit is, in addition to its earliness, both large and of fine flavour. Adams's Crown was the next. This is a rather small, but highly flavoured variety of the Bigarreau class. Planted against a south wall it never fails to produce a crop, and being one of the first to bloom is very attractive in early spring. Bigarreau de Schreken ought certainly to find a place in all gardens on account of its fine flavour. Black Tartarian was certainly never better than it has been this year; though the fruit is perhaps not quite so large, the crop is all that could be desired. To prolong its season I have it planted on various aspects, for on a hot south wall the fruit soon loses its flavour, while on one facing north or north-west it will often keep good till the middle of August. Frogmore Bigarreau and Empress Eugénie were also very fine; while some of the later kinds, such as Reine Hortense, Florence, Bigarreau Napoleon, Bigarreau de Hedelfinger, have very fine crops that will with care give us a supply till the end of next month. It is generally thought that Cherries do not succeed well on a north wall, and this may be the case in the northern parts of the kingdom, but here they do very well indeed; in fact I have them planted on every aspect, where they grow most luxuriantly. Black Tartarian, Elton, May Duke, Late Duke, Florence, Duchesse de Palluau, Black Eagle, Empress Eugénie, Buttner's Black Heart, and Morello all succeed well when grown thus, and by so doing the season is extended by several days. I have never had Bigarreau Napoleon or Florence so fine as they have been this year, the fruit hanging in clusters all along the branches. Morellos, too, are very good, though I fear the fruit will not be so large as it usually is owing to the long spell of dry weather. Trees that are carrying heavy crops of fruit will be greatly benefited if a thorough soaking of liquid manure could be afforded them, or, failing this, some artificial food sprinkled over the surface and washed into the soil. It is not wise to encourage the trees to make a too sappy growth, but when the trees are carrying heavy crops of fruit they will need all the support that can be afforded them, otherwise they will soon become sickly and fail to make sufficient wood to produce a crop of fruit. The foliage and fruit should also have a thorough washing before it ripens, particularly that which it is intended should hang till the end of September, as this will rid the trees of any cobwebs or other dirt that may have accumulated. Netting the trees should be attended to at once, as birds are very troublesome this season. Wasps also are becoming very numerous, and if the present dry weather continues will be a source of much trouble to the fruit grower.

H. C. P.

Buxted Park, Uckfield.

Pruning Black Currants.—The somewhat novel method of pruning Black Currants as described by "D. T. F.," p. 17, will not commend itself to all cultivators of this fruit. In some gardens Black Currants do not grow sufficiently fast to bear such drastic cutting down as suggested. We all know that Black Currants of the finest quality are produced upon the young and vigorous sucker-like growths that annually spring from the base of the bushes, but the difficulty is to get the trees so vigorous as to warrant all the fruiting branches being cut clean away yearly. —E. M.

—— I was pleased to see "D. T. F." (p. 17) advocating the early pruning of Black Currants, and though I have not advanced so far as his fellow juror in removing the branches with the fruit on, picking the fruit therefrom in a shed, I can fully recognise the advantages of doing so. For the past fifteen years I have pruned immediately the fruit has been all picked, cutting away most of the old wood that has borne a crop, and encouraged in every way the production of young wood or suckers from the base. During the whole of the period named I have never failed to have excellent crops of Black Currants and the berries of more than average size, that have been equally valuable for home use or market. Some time ago I went round a large fruit-growing place where Black Currants are admirably grown, and the manager attributed their success in a great measure to the annual removal of as much old fruiting wood as could be spared without unduly reducing the dimensions of the bushes. Many other instances could be quoted to prove the great value of early pruning, but, as "D. T. F." truly remarks, the single stem style of training is utterly unsuited for the production of young wood from the bottom. Another advantage of the system advocated is the reduced attack of the Black Currant mite. Such bushes are not only more vigorous and healthy, but the wood is so well matured that the insect appears somewhat loth to infest the buds. In all fruit-bearing trees we find those that are crowded with imperfectly ripened wood, and also weak, certain to become infested with hosts of enemies, whereas those full of strength escape in a great measure. In addition to the early removal of exhausted wood, I burn the same when the pruning is finished, returning the ashes to the soil, thus replacing to some extent the elements taken therefrom and preventing the accumulation of insects that are so apt to get into the heaps of prunings.—W. G. C.

Garden Flora.

PLATE 1024.

SELF-COLOURED CINERARIAS.

(WITH A COLOURED PLATE.*)

Cinerarias remain, as they have for many years past, amongst the most popular of greenhouse plants. They are formal in no small degree, but the flowers are so splendid in colour, broad, full and massive, that we welcome them for the brilliant display created by a bold group in the late spring months.

The coloured plate represents three varieties selected from those in bloom last spring in the nursery of Mr. James at Farnham Royal. He has brought, by careful and successful hybridisation, the flower to great perfection, and the several houses of plants in full beauty are a picture we enjoy, because harsh and poor colours are rigidly eliminated. Only flowers are retained that give such beautiful self tones as those represented in the plate. One house will be filled with an intense crimson, another with royal blue, then pure white, and so on through a delightful series of shades, either purely self or set off by a margin of some distinct colour on a ground of white. Last spring one large house was filled with nothing but forms with flowers of shades of blue, some light, some dark, some entirely self, others again white, touched with perhaps a sky-blue shade or the reverse.

It is this purifying of the colours that deserves hearty encouragement, and we would wish that in other florists' flowers a sifting out of the magenta shades could be quickly accomplished rather than encouraging colours that spoil utterly what would be a charming race. Once get a family spoilt by a wretched muddy or unpleasantly harsh colour, and it is the work of years to drive out the dross. Visitors to the spring displays of the Royal Horticultural and Royal Botanic Societies will remember the groups from Farnham Royal, in which one gets a plant, dwarf perhaps almost to a fault, but sturdy, dense, with a wealth of robust foliage almost hidden by a crown of blossom, packed well together, yet not hiding the true form of the individual flower, broad, massive, and not coarse. Size in this instance does not mean coarseness, but we rejoice in bold flowers of splendid and diversified colouring. Perhaps we may in time extend the flower colouring, at least there is room for other shades, and they will be welcomed if pleasing and a departure from those we are familiar with. We need say little more about the flowers seen in our coloured plate.

The culture of the Cineraria has been described so often in The Garden, that it is a weary, because oft-repeated, task to travel over ground already well trodden, but we may mention that the plants at Farnham Royal are grown in low span-roofed houses provided with ample ventilation. It is possible by hybridisation to almost alter the entire character of a plant. Look at the modern Cineraria compared to the species from which the race has sprung—C. cruenta, introduced from the Canary Islands in 1777. This Cineraria is a beautiful plant, as the groups in the Royal Gardens, Kew, show, an informal, branching and charming plant growing several feet high and laden with soft purplish coloured flowers that stud the shoots like the stars of a Michaelmas Daisy. It only wants greenhouse treatment, and is worth growing not only

* Drawn for The Garden by H. G. Moon in Mr. James's nursery at Farnham Royal. Lithographed and printed by Guillaume Severeyns.

for its telling effect in a mass, but for the value of the graceful bending sprays in the house. Another plant sometimes called C. aurita, but correctly named Senecio lanata, is too much in the background. Its beauty is of a different kind to that of C. cruenta, but quite as precious. It blooms in the summer months, continuing for many weeks, and grows from 2 feet to 3 feet high, the leaves being conspicuous for the silvery down on the underside. The fragrant flower-heads are several inches across and composed of white ray petals charmingly tipped with bright purple, the disc of a purple shade also and forming a charming association. As each flower is 1½ inches broad, one can see that a plant in bloom is full of soft colour. Its culture is quite simple if cuttings are taken in May before the plant blooms, selecting the shoots at the base. Place them singly in pots 2½ inches in size and stand in a propagating frame. Pot on when rooted and thence onwards until 6-inch pots are reached, a size sufficiently large to produce good flowering specimens. Pinch the shoots once or twice to induce a bushy habit, and when the plants are in full growth give liquid manure. Like C. cruenta, this is also a native of the Canary Islands.

The Week's Work.

FRUIT HOUSES.

Figs in pots.—The trees which fruited early in the spring should now be thoroughly exposed to mature the wood, and thus prepare them for hard forcing. In advising exposure I do not mean that the pots should be exposed, as this will cause much drying and loss of roots. Plunging in larger pots or in soil is a good plan, the latter preferable, as less moisture is needed and the roots are kept quiet. In whatever way the plants are treated it is well to keep the surface roots active by a good mulch and ample moisture. Such kinds as Pingo de Mel, St. John's or other early varieties will have ceased to grow and will be showing the embryo fruits at the points of this year's wood and on spurs. These must be kept as quiet as possible, just damping over in the evening to keep the wood plump, and should scale have got a foothold, now is the best time to cleanse, using soapy tepid water and a soft brush, as when the fruits get larger they are easily injured. I am a great advocate for repotting just as the trees lose their leaves, and with early forced pot trees there is no better time to do this work than during the next few weeks, getting the compost prepared at an early date. If at all dry it can be turned frequently and watered. Such aids as bone meal, old mortar rubble and sound loam should be preferred to manure and light sandy soil. Plants that have become large and which it is difficult to give a larger shift to may be turned out, the drainage removed, strong roots cut away, and say 2 inches of the old ball removed with a pointed stick, cutting clean away some of the oldest roots, repotting firmly into the same sized pot, and damping freely overhead for a short time till new root action is active. Plants that do not need repotting should be top-dressed and treated as advised for plants just turned out to mature their growth. Young plants potted on should be shut up early, not allowed to carry fruit, and stopped when the new growth is from 4 inches to 6 inches long. If the pots are well filled with roots, liquid manure and top dressing will be beneficial.

Figs planted out.—Trees in the earliest house will now have nearly perfected the second crop, and should not be allowed to carry more fruit, as if overcropped now, next season's first crop will be poor. Free exposure and thinning out of useless wood will now be all that are required, not omitting to freely syringe the trees in the evening. Maintain a free circulation of warmth in the pipes to assist in the ripening of the new wood, and do not fail to remove fruits now showing, as these will not remain on the trees. The first crop for next season will greatly depend upon the new growth, which should be as hard and brown as possible. Now is a good time to cut away any useless wood and thus give that left free exposure. The roots should not be neglected, and if previous mulchings have been washed away give another now. In light soils I have found cow manure a splendid mulch at this season. If a dressing is given when the manure is partially dried and well watered afterwards, the surface roots soon go freely into it.

Later trees will now be furnishing a second crop of fruit and showing many more than is good for the trees. A large portion should be removed, especially those on the upper branches, and no time should be lost in doing the thinning to prevent the fruit being small. A genial temperature should be maintained, shutting up early and damping all parts of the house. Every opportunity should be taken to syringe the trees both above and below the trellis if the fruits are not ripe to prevent red spider doing mischief. With so much sunshine the crop is more advanced than usual, but I do not advise retarding, as the resting period is none too long, and only a good second crop should be taken. Late houses not forced should have plenty of air, and in sunless days or damp nights a little warmth in the pipes, at the same time giving air on the top ventilators. Thin the fruit freely, as also the wood, removing any late-formed fruits, as these will not ripen and will prevent the formation of good fruiting wood for next season.

Bananas will at this season repay for extra attention in the way of plenty of rich food. Plants showing fruit should now be induced to throw up, as the fruits formed during the next few weeks will ripen next spring and be most acceptable. Plants likely to fruit should be kept cooler and not fed till they throw up. By giving a slight check the formation of the fruit is hastened, and liberal supplies of food may then be given in the form of liquid manure. Plants at what may be termed the successional stage should be kept moving, but not checked, gradually reducing the temperature as the days shorten. Should red spider be troublesome, sponge the leaves with soapy water, syringe freely, and maintain a moist growing temperature. Sucker growths from fruiting plants should be potted up when large enough.

Orchard house.—Trees that have been cleared of fruit and have perfected their growth should now be removed to an open sunny quarter, plunging the pots, covering the surface with short litter or spent manure, and supplying the roots with plenty of water. A good syringing overhead in the evenings after hot sunshine will do much good and keep the new foliage clean and healthy. Late fruiting trees will be much benefited by mulching. The same remarks apply to earlier trees; if the mulch is spent or washed away it should be renewed and the trees given copious supplies of water both overhead and at the roots. Apples, Pears and Plums in pots require rich food. Thinning should be vigorously carried out, fine fruits being the chief points required in pot trees. Remove any growths shading the fruit.

Strawberries in pots.—If the plants were layered as advised, no time should be lost in detaching them from the parent plants and placing for a few days under a tree or north wall where partial shade may be afforded them, watering overhead lightly two or three times daily to prevent flagging. Previous to potting up, no matter how the plants are secured, it is well to prepare a good heap of compost, selecting a good sound or retentive loam, and adding a liberal portion of old Mushroom bed manure with a sprinkling of bone-meal or wood ashes. Many good growers advise the use of soot, but care is required not to use it in large quantities, as the small tender roots are liable to suffer. I prefer to water later on with clear soot water. If soot is used it is best laid over the crocks under the layer of large pieces of soil usually placed in the pots when potting. The required number of pots should be got together, and if new, soaked for a short time in a tank before using to prevent them absorbing moisture from the soil. Pot firmly, and in placing the small ball in the fruiting pot take care not to bruise the roots with the potting stick. Keep the collar of the plant just under the surface after the pot is filled, and in all cases leave plenty of space for water and food. After potting, stand the plants on a hard coal ash bottom, water sparingly till new roots reach the sides of the pots, and lightly dew overhead with the syringe in the afternoon when the sun declines.

G. Wythes.

THE KITCHEN GARDEN.

Gherkins.—These are still grown by some gardeners, and are most useful in autumn. They also come in well for pickling associated with other vegetables. If the plants were favoured with a sheltered situation and duly protected from cutting winds and late frosts, growth will now be vigorous. Do not allow many fruits to remain on the plants for the present, as there is yet plenty of time for a good long fruiting season before the plants are cut down by frost. Before more growth is made mulch well for some distance round the main stems with short manure, and give a soaking of farmyard liquid once in three weeks. Keep all weak and deformed laterals in the inside of the plant thinned out, and all small blooms removed as soon as they appear. If in an extra warm, dry situation, the foliage will be liable to the attacks of red spider, which if not destroyed quickly weakens and destroys the general vigour. To check it apply the hose or the garden engine once a week at eventide, plying it as much as possible on the underside of the foliage.

Late Vegetable Marrows.—Seed of this esteemed vegetable sown now will produce plants which, grown on with care, will yield fruit at a date when the bulk of the Pea and Bean crops is exhausted. Place the seed pots in a cool frame or greenhouse, and bring the plants on as hardy as possible. This will give them a wiry constitution, and one not easily affected by moderate frosts, should such occur in early autumn. As soon as the roots have well filled a 4½-inch pot, transfer the plants to their final quarters, letting this be as warm and as sheltered as possible, and where rough protection can with ease be given as soon as the cool nights of October approach. For this batch there is no better variety than Pen-y-byd, as this is a short-jointed, moderate grower, and more easily protected by stakes and canvas or mats than are some of the more rampant growers. When planting always leave a small basin round each stem, so that the balls may be kept well moistened until the plants are well established and better able to take care of themselves. Although planted late, mulching will be advisable, as, provided there is ample drainage, Marrows cannot well be too moist at the roots.

Old Seakale beds.—Where these have been forced from year to year with pots and leaves the plants will, on account of early growth, now be covered with flower-stems. These must all be cut off, and if more side growths have emanated from the old stools since the thinning out advised some time ago was given, the whole of these also must be cut away. Now is the time to apply stimulants, either in the form of liquid of fair strength, or artificial manure sown broadcast and watered home.

Spring Parsley.—There is often a great scarcity of this commodity during March, April and May, and indeed until the spring-sown batches are fit for gathering. There is usually such a call for it for garnishing during the winter, that all full-grown plants, even if protected by frames and pits, get severely punished, these coming away into new growth slowly in spring. In order, therefore, to meet this emergency I always sow seed on a well-worked rich piece of land about July 20. This, if well looked after and duly thinned, will make capital strong stuff for standing the winter with frame protection. Sometimes it makes sufficient growth by autumn to

allow of a little being picked from it in winter, but it is not advisable to take away any but the very strongest fronds. In February this bed will rush into growth and furnish abundance of capital Parsley through the months above named. Earlier in the summer I advised the preparation of the plot for this crop, incorporating a fair quantity of gaslime and burnt earth, and if this was done, further precautions may be taken at sowing time by strewing wood-ashes in the drills after sowing the seed. Thin out the seedlings as soon as fit to handle, this being doubly important with Parsley that has to stand the winter.

Endive—main crop.—I sow my main crop of broad-leaved Endive from July 15 to 20, selecting a somewhat cool moist border from which Potatoes or Peas have been cleared off. Sow broadcast, not in drills, using only a moderate quantity of seed and netting over at once, as chaffinches are very partial to Endive seed. Fraser's Improved Broad-leaved is about the best variety for winter and spring use, not being so liable to bolt as the ordinary strains of Batavian. Sow also Moss Curled for earlier use, this not keeping with any degree of certainty after the fogs of November and December set in. Another sowing of the Broad-leaved should be made at the end of the month. One of the chief points in the successful culture of this salad is early and liberal thinning of the seedlings and final transplanting into good rich land, with frequent after-waterings should the weather prove dry. For early use a percentage of the young plants of Moss Curled may be left at regular distances on the seed bed; these receiving no check will go away rapidly and be fit for use during October, being blanched by placing large slates over them. Endive always pays for extra good treatment, as if grown on poor shallow land it becomes tough and bitter, spoiling the salad bowl. J. Crawford.

Kitchen Garden.

ENDIVE.

While good Lettuce is forthcoming there is much less demand for Endive. If the former either fails or is only little better than green leaves it is then when the winter substitute is most appreciated, though for my own part I consider Lettuce and perfectly blanched Endive go remarkably well together, one improving the other. Green Curled, of which there are two or three forms more or less distinct, is usually grown for the earlier, the Broad-leaved Batavian being a little later in attaining its full size, though by far the more valuable type. The value of the latter fine Endive is scarcely appreciated by those in charge of small gardens, and for their especial benefit I would add that it can be grown to such perfection as to almost rival the most perfect Cos Lettuce that can be produced, and might with advantage be more largely eaten as grown, that is to say, without being cut up and without dressing.

Ground newly cleared of early and second early Potatoes ought, without much labour being expended on it, to be in excellent condition for a crop of Endive. The preference should be given to the higher well-drained positions, more especially in the colder low-lying districts, as it sometimes happens that a severe frost is experienced before the crop can be properly stored, and it is in the lower quarters of a garden that it is most felt. It is quite time too that a start was made, and if a batch of plants has been already raised, so much the better. In the latter case there should be no delaying transplanting till the plants have pressed against and spoilt each other, sturdy Endive moving in the hottest weather without experiencing a severe check. Supposing the ground has been levelled, trampled if very loose, and generally firmed down, drills may be drawn 12 inches apart ready for the plants and, if need be, watered. Before drawing or raising the latter give the seed beds a good watering, and this will save more of the roots. For the earlier crops or those that are to attain their full size, a distance of 12 inches apart may be allowed from plant to plant, but rather less space is sufficient for the later crops. Water when planted, and if the weather keeps dry occasionally afterwards. Instead of wholly clearing a seed bed the better plan would be to thin out the plants to a distance of 6 inches apart each way, and without much further trouble a serviceable early supply of well-blanched Endive will be had. As the plants in the thinned seed-bed increase in size they press against each other, and in time the outer leaves effectually enclose the hearts, blanching taking place accordingly. I have cut a surprising quantity of really good Endive from seed-beds 12 feet by 8 feet, and it does not keep so very badly either if duly protected with a rough frame and mats.

If no seed has been sown, then there ought to be no further delay in getting some in. Seeing that there is now a fair amount of ground clear or which may be cleared of other crops, and also that transplanting acts as a check to the growth of the plants, the plan of sowing the seed where many of the plants are to remain should be adopted. Prepare the drills much as advised for planting, not omitting the important detail of giving enough water or liquid manure to well moisten them, then sow rather thinly, cover with fine dry soil or level over, and do not resort to watering till the plants resulting show signs of needing such assistance. Where the seedlings come up rather thickly thin out lightly and timely. When large enough to move, other rows may be planted with the thinnings, these affording a good succession, and, I need hardly add, any blanks in the rows should be filled up. Finally, leave the plants from 10 inches to 12 inches apart, the greater distance proving none too much where the soil suits Endive. In order to have a late supply, or plants that can be kept till the spring, sow more seed, principally of the Broad-leaved Batavian, during the first fortnight in August, and the transplanted or smaller plants, if located on a rather dry border, will stand a fair amount of frost, though they would naturally be safer in pits and frames. Those who already grow Endive extensively ought also to bear in mind that well-grown plants of the Broad-leaved Batavian are well worthy of being used as a vegetable, forming a very acceptable addition to the none too extended list of winter vegetables. Mere driblets, however, are of little service, and enough ought to be planted now on good ground to fill a great rough frame or pit next autumn.

The earlier batches of Endive—or say any already established where they are to grow—will not generally require to be protected, as these should be ready for use during the latter half of September and onwards. Much in each and every case depends upon the blanching being perfect, and it must also be remembered that well-blanched produce does not keep long. Not till the plants are nearly or quite fully grown are they in the best condition for blanching, and this should be done a few at a time. The earliest in the open may be tied up Cos Lettuce fashion, the outer leaves well enclosing the hearts, and if wanted particularly quick, be further enclosed in inverted flower-pots with their drainage holes stopped. One good old plan is to plant the earlier Endive in rather deep drills, or such as might be drawn for Peas, and later on to lay boards, slates or tiles over the rows. Extra good beautifully blanched hearts can be had by adopting the plan of gathering the outer leaves around the hearts, not unduly confining the latter, and then covering with benders and mats, this in preference to moulding them up. Nearly or quite fully-grown Endive is far from being hardy. A moderately severe frost will damage the tips of the leaves and a rather rapid spread of decay results. It cannot, therefore, be said to be safe after the third week in September, though in the more southern districts it is frequently left out unprotected weeks later. Transplanting is a simple matter, and there should be no undue delay in moving the plants to where they can be protected. Storing where fire-heat is given is a mistake, as this causes Endive to run to seed quickly. Hundreds of plants might be stored in rough frames and protected with shutters, mats or litter, and glazed pits or frames may be similarly utilised. So also might the fronts of Peach cases, houses and vineries, and when hard pressed I have stored a quantity of Endive in open-fronted sheds, extra protection in the shape of mats, old canvas and newspapers being afforded as often as need be in each instance. Too often the roots of newly-lifted plants are surrounded with poor, dry soil; whereas they ought to have the benefit of some rich moist soil. They will root strongly into this and the quality of the hearts be improved accordingly, those formed by plants dry at the roots proving tough and bitter in flavour. Select a dry time for moving the plants, and tie up each with a strip of raffia prior to lifting with a fork or spade. Save a fairly good ball of soil about the roots, and carry on hand-barrows or in flat baskets rather than jolting wheelbarrows to their destination. They may be packed moderately closely together, making the soil firm about the roots, and the greater part have the ties loosened or wholly removed. Never let the soil become dry. It only remains to be added that, failing rough frames, large numbers of plants might be massed together on a warm border and there be protected with a framework of wood or benders supporting mats and such like. The Mushroom house and also warm, dark cellars are capital places for blanching Endive, batches of plants being transferred to these every week or so during the late autumn and winter months. Even in this case the plants should have their roots surrounded by moist, good soil. W.

Cutting herbs.—Before such things as Mint, Basil and summer Savory get too far advanced or lose much of their foliage it will be wise to cut a sufficient stock of each, and after exposing them in a dry vinery at rest for a week or ten days, to suspend them from the ceiling of a fruit or herb room; there will then be no fear of scarcity during the winter months. When harvesting is left till the autumn there is frequently in the case of those subjects named nothing but stalks left.—J. Crawford.

Salsafy and Scorzonera.—The protracted drought of early summer has caused some of the earlier sown rows of these two roots to run to seed, or has produced a growth that will ultimately do so. The value of secondary sowings will therefore be apparent, these not at present being past the thinning stage. Give plenty of room, mulch if possible, and soak with liquid manure. Large roots of good quality may sometimes be secured by sowing moderately early on a north border and feeding the plants at intervals. Thus shielded from the scorching sun, running to seed is less frequent.

Latest French Beans.—From sowings made as late as July 20 it is quite possible to get useful pickings, provided the site is a sheltered one and protection be given to the crop after the middle

of October. Sometimes several three-light frames can be spared at that date, but if not, posts, cross-rails, and mats or canvas are good substitutes. Sion House, Newington Wonder, and Sutton's Dwarf Forcing are all admirably adapted for this late sowing, being less vigorous and sappy than many of the taller varieties, and therefore less susceptible to injury from rough winds which often prevail in autumn. Allow each plant plenty of room, so as to ensure a stocky and robust growth, the only guarantee for productiveness at a season when days are shortening and sun heat is less abundant.

Lettuce for autumn.—A sowing may now be made of suitable sorts of Lettuce for hearting in during September and October. Daniels' Continuity and All the Year Round are the best sorts in the Cabbage section, Hicks' Hardy being a capital Cos variety. Where late Celery is grown, the Lettuce plants may, as soon as fit to handle, be put out in well-moistened, shallow drills on the ridges between the rows; they will then all be cut before the last portion of soil from the ridges is required for earthing up. The sowing for winter supply may be postponed until next month.

Varieties of winter Spinach.—Few vegetables were so valuable last winter as Spinach; indeed in some gardens it was the only green vegetable left after the severe frost. There is no gain whatever in sowing the old well-known Prickly variety, as in the early spring it bolts quickly. There is another form of Spinach known as Long Standing Prickly, but I do not think it is superior to the round-leaved varieties. I should say it is a selection from the old type, and is recommended for its long standing before running. The best winter Spinach I have grown is the Victoria, and last season I do not think fifty plants failed out of thousands. The Viroflay is another very fine type of winter Spinach, and a valuable addition to the list. It is by some thought to be identical with Victoria. The Long Standing Round is also very similar to the Victoria. The three varieties of round-leaved I have noticed may all be relied upon for winter sowing, and will be found a great gain on the older types both in hardiness and bearing.—G. W.

WINTER TURNIPS.

Those who had a good store of Turnips last winter were fortunate, as the green crops were so much injured by frost that Turnips made a useful addition to the meagre supply when sown specially for winter use. Now is a good time to take into consideration the winter crop. I usually make two sowings—one the last fortnight in July, another early in August. The roots from the latter sowing remain in the soil to supply green tops, and if necessary fresh roots early in the year. By sowing at the season named a hardy kind, such as Yellow Petrowski, Golden Ball, or Chirk Castle, good roots may be had. For storing, Veitch's Red Globe is, I think, the finest type of autumn Turnip grown, being solid, of splendid quality, and a good keeper. This variety sown now will be of just the size required for keeping through the winter, stored in a cool shed or cellar, with plenty of soil, sand, or ashes to keep the roots firm. The Red Globe is a white-fleshed variety, with a band of crimson round the top, and in shape much like the early Snowball. Turnips may often follow second early Potatoes, but should the ground be dry it is well to saturate the rows before sowing and afterwards. To get good flavour, quick growth is essential. To secure this I have found a small portion of bone meal mixed with wood ashes and placed in the bottom of the drills very effective. Wood ashes is a good fertiliser, and superior to large quantities of animal manure. Many persons object to the yellow-fleshed Turnips, such as those recommended for early spring use, when the winter store is exhausted, but it is an objection that may soon be removed, as the flavour is superior if the roots are well grown. In the north these yellow-fleshed kinds are much liked, and a white Turnip would stand but a small chance against the golden section both for keeping and flavour. The Chirk Castle Blackstone is white-fleshed and as hardy as the yellow kinds, but inferior in quality.

In sowing winter Turnips it is well to give ample space, as the plants if too thick do not bulb freely. A space of 15 inches between the rows is none too much, and by giving the plants room, firmer and better keeping roots are secured. To keep these roots sound many shifts may be employed. A warm store soon causes the roots to grow out badly and shrivel. Turnips do well pitted like Potatoes, but they must be well thatched over to prevent wet going through the covering. Roots stored in this way are of much better flavour than when housed in a dry or warm place. Turnips to stand the winter should be sown on an open quarter, and be frequently dressed with soot in showery weather if slugs are troublesome. G. Wythes.

PEAS.

So far as the tables of the rich are concerned, large Peas are each year becoming more and more unpopular. For ordinary Pea eaters and those who want to make the most of their land, it matters not how large the variety so long as it is tender, sweet and of good colour, but private gardeners having to study their employers' tastes will, it is evident, have to confine themselves for the most part to small and medium-sized Peas. Of course, all must grow the small round section for first early use, none of the larger sorts doing their work in anything like so short a time; and for following Chelsea Gem I think William I. is still the best, the new Oxonian, although doubtless a good Pea, not being in my opinion equal to that sterling variety. At one time I thought it a more continuous cropper, but after another trial under exactly the same conditions, I see no difference in that respect, and William I. is of far better colour—a great consideration in private gardens. That well-known Pea, Wordsley Wonder, is a capital variety, being all that can be desired both as regards cropping qualities, colour and flavour. It is of a most convenient height for amateurs and all who have difficulty in procuring tall Pea rods. Although, of course, the yield per single row is less from these medium growers than from the taller section, this deficiency is made up by allowing far less space than is practicable with tall Peas; or if ordinary room is left, Cauliflowers, Potatoes or Lettuces may be grown in the spaces. That grand old Pea, Laxton's Fillbasket, is still to be had true from various seedsmen, and I intend in future to grow plenty of it, as it would be hard to beat by any of the newer medium-sized Peas. The best crops of this delicious Pea I ever saw were grown on a lightish soil in shallow trenches, mulching and watering being practised as soon as the bloom appeared. This is, I think, the best method to follow in the culture of all the medium growing varieties, except on soils that are naturally very moist. Perhaps the very best all-round summer Pea is Criterion, it being the nearest approach to Ne Plus Ultra of any Pea we have, though not growing quite so tall. It may be sown for succession close on the heels of William I., and right on till the June sowings of Ne Plus Ultra, British Queen, and other late Peas are made, and although too tall for ordinary field culture, it would, I am certain, pay well in market gardens, even though stakes had to be used for its support. Veitch's Perfection must be included in the list of first-class Peas. True, it requires good culture, but this it well repays. Omega, another old Pea of somewhat short growth, may still be regarded as one of the very best from a quality point of view, and just the very Pea for amateurs. It crops continually and well and possesses the richest flavour, while its deep green colour is very taking on the table. For this latter class of cultivators, perhaps the most useful Pea for extra late purposes is Walker's Perpetual Bearer. Its average height is 3 feet, quality first-rate for a late Pea, its great mildew-resisting powers adding greatly to its value. I had almost forgotten Autocrat. This new Pea will surely make its mark. Its drought-resisting powers on hot, dry soils are wonderful. It yields abundantly and over an exceptionally long period, the pods, which are of a dense green colour, filling slowly, which is of great advantage when sown with other sorts, a succession being thereby secured.

More might be added to the list, but the foregoing will be found to satisfy where large varieties are objected to. Raisers of medium-sized Peas may rest assured that such will in the future be almost exclusively grown in first-class private gardens. J. Crawford.

Cauliflower Pearl.—I have this season fully proved the merits of this new Cauliflower. It is indispensable for following Walcheren, to which, in my opinion, it bears a very strong resemblance. Its habit is good, the young inside leaves folding well over and protecting the heads. It does not, like some varieties, come in too quickly when once the heads begin to form, and may, by timely covering with the outer leaves, be retarded for a considerable time. Altogether, I consider Pearl a valuable acquisition, which should be grown by everybody.—C.

White Elephant Potato.—For a few years after the introduction of White Elephant it was largely grown both by cottagers and private gardeners. Many of the latter, however, abandoned it on account of its liability to grow too large on good soils. Many cottagers still cling to it principally on account of its tremendous yielding powers. In this neighbourhood it seems to be a favourite, and large breadths of it may be easily picked out in allotments by the bold, handsome trusses of white flowers which characterise White Elephant. The slightly pinkish colour sometimes discernible in this Potato proves, I think, its relationship with Early Rose, and both these Potatoes, together with many others that are liable to eat soapy from good, rich land, become mealy and excellent if grown on comparatively poor soil. —C. H.

Intermediate Lettuce.—This is a distinct type suitable for such seasons as this when good solid Lettuces are difficult to obtain on account of their running so quickly. I recently saw this variety in splendid condition at Gunnersbury House, Mr. Hudson being much pleased with it. I was much surprised to see such a small firm Lettuce have so much heart. There is no waste whatever, as the outer leaves fold quite close, readily blanching all portions of the plant. In habit it is between the Cos and the Cabbage, and in colour it much resembles the old Bath Cos, the flavour excellent and superior to that of the loose, large growing type of Cos or Cabbage. I should think it would be a very good variety for frame culture for the autumn or early spring. I intend to give it a trial for this purpose.—G. Wythes.

Cottagers' exhibitions.—When inspecting the various exhibits at one of these exhibitions the other day I could not help thinking what a mistake it was to hold such in the month of July. This is far too early in the year for the bulk of cottagers' produce. The only vegetables that are then well represented are Peas, Potatoes, Broad Beans and Tripoli Onions. Spring Onions have by that date only reached half their normal size, while the same may be said of Carrots, Parsnips and Beets. Beans of the French or runner section are either absent or very poorly represented, while a good display of Leeks, Celery and various other things is quite out of the question.

Cottagers who exhibit roots at this early date have often to spoil their beds in order to find a dozen of the best specimens it contains, and the same might be said of Potatoes. When the shows are held, say, at the end of September, far better all-round results attend them, and all Potatoes, except the latest varieties, may then be lifted and stored for future use, the best being selected for the show. As for fruit, Currants of all kinds, and even Gooseberries, if protected from birds will hang well till the later date and be the riper and better for it. I think it is a capital plan at these rural gatherings to include farmers' produce in the schedule, this making the show far more interesting and securing a larger number of visitors. This, of course, cannot be done during July or the early part of August.—J. C.

Spinach.—The crop of this vegetable resulting from the sowing advised a fortnight since must now be seen to, as although growing on a shady north border it may be none too moist at the roots, especially if another crop preceded it. Thin out the seedlings, well mulch with old Mushroom manure, and give a good soaking with farmyard liquid; this will probably carry it on to the gathering stage. This may appear troublesome, but unless this precaution is taken, Spinach is very apt to run to seed prematurely at this late date, even when growing on a north border. The next sowing should be at the beginning of August, choosing an east border; this will come in well at the close of September and throughout October. The winter sowings must be deferred until the third week in August and first week in September.

Pea Hundredfold.—About twenty years ago this Pea was much in favour, and I never saw heavier crops than were grown by a friend who relied to a great extent on this variety. I lately saw it growing side by side with Fortyfold, Duke of Albany and other standard kinds, and it seemed to be yielding more abundantly than any of them. I remember once seeing some rows of this Pea grown on rather heavy loam, and looking down the rows there seemed to be more pods than leaves. Fortyfold is, in spite of the numerous varieties that one can now choose from, one of the surest cropping Peas, and seems to be well adapted for culture on light soils. In this district some still grow the Pea that was once widely known as Jeyes' Conqueror, but which does not seem to differ appreciably from Ne Plus Ultra.—J. C. B.

Radishes.—Radishes cannot be grown at this season of the year without special pains being taken, as in sunny positions and in ordinary soil they become hot and stringy even in spite of regular waterings. A north border is the best position, and the ground must be prepared by the addition of burnt refuse, potting shed soil and a portion of old Mushroom manure; this should be well worked into the border and a good soaking given, the seed being sown a day or two after. Even in this cool aspect watering must not be neglected, and free thinning of the crop must be practised as soon as the plants can be handled. The quick-growing Olive-shaped sorts are the best for this date, and a sowing every three weeks will be advisable where a constant supply is expected. —N.

Watering Carrots.—I have heard that watering Onions will induce an attack of the fly, and I have now come to the conclusion there may be some ground for such a belief. I was lately shown two lots of Carrots one of which had been well watered, the other remaining dry through the past dry weather. The watered ones were immediately attacked by grubs and were totally ruined. Every Carrot was eaten away at the point, and on opening a root a little white maggot was found in it. This is very different from the brown grub that attacks the roots near the surface. This can be checked by hand-picking, but in the case of the maggot above mentioned it is impossible to get rid of it in that way. It was curious to note that the plants that had remained dry had not in the least suffered, and yet they were growing within a few feet of those that were totally destroyed.—J. C. B.

ARRANGING CUT FLOWERS.

FOR arranging cut flowers in a bold and natural way large simple glasses or bowls are the best. We have mechanical inventions wherein to arrange cut blooms, so that, as we are told, each leaf and flower can show its individuality, but fine flowers can only be enjoyed when simply arranged much as they grow in the open air. The illustration of sprays of the common white Jessamine will convey our meaning far better than words. During the greater part of the year there should be no scarcity of cut flowers, and when we can cut bunches of Roses, Carnations, and Irises, these surely should suffice of themselves, care being taken in every case if possible to use their own foliage as a foil. When arranged loosely, as in the case of the Jessamine, the quantity required is far less, while the effect is heightened in every way. By filling each bowl or vase with one thing, we can, when the flowers fade, clear them out and replace with others of a different form.



Flowers of the white Jessamine in a vase. From a photograph sent by Miss Marker, Combe, Honiton.

At the shows prizes are often offered for the best arranged epergne of flowers for table decoration, and although the arrangement may appear effective when done, the labour required is very great. Prizes for such arrangements only foster a false taste and give no idea of the beauty of flowers boldly used in a cut state, and cannot be accepted as examples of how they are to be arranged in the house, as they often associate badly, their lasting properties, too, varying considerably and necessitating much touching up to keep them in a presentable condition. An arrangement which we lately saw was very pleasing, and consisted of the common Cornflower cut with long stalks and arranged with the airy Gypsophila paniculata.

Canna Miss Elsie Perkins.—At the Cheshunt Nurseries the new Gladiolus-flowered Cannas are largely grown, and Mr. G. Paul has raised several very good kinds. That which bears the above name is distinct and charming in colour. There are now so many named varieties that the number is confusing, but one cannot question the wisdom of naming this kind, which gives us what was wanted, a pure yellow self free from spots of any other shade. It is curious that, whilst scarlet and crimson selfs were abundant, every yellow kind sent out was thickly spotted or streaked with red. The flowers of the variety under notice are of a most delightful shade of pure canary-yellow, the flowers being of fine size with good broad petals.

WORCESTERSHIRE ORCHARDS.*

WORCESTERSHIRE orchards have long been famous in the annals of this country, for although records are fragmentary and incomplete, it is fairly certain orchards have existed and flourished in this county for a very long period.

In the year 1633 we find Gerard writing upon fruit trees and existing orchards, and he states what was at that time considered the proper functions of the orchard, viz., for the production of cider and perry. He particularly mentions a certain Master Bodonome, who lived on the borders, but in a neighbouring county, "who cultivated so many Apples and Pears that no other drink was used beyond that made from these fruits. Moreover, the quantity made was so great that the parson had for tithe many hogsheads thereof."

Gerard further enjoins landowners of that day to "go forward in the name of God, to graft, set, plant and nourish up trees in every corner of your ground. The labour is small, the cost little, the commodity is great. Your fellows shall have plenty, the poor shall have somewhat in time of want to relieve their necessities, and God shall reward your good minds and diligence."

It is quite possible that the few patriarchal old trees yet to be seen (Pears especially) are the surviving relics of this logical advice. Mention is also made of Pear orchards in the time of Henry V. At Agincourt, also, the men of Worcestershire (according to Drayton) had for their device upon their banners a Pear tree laden with its fruit. Again, there is that famous old variety of Pear, the Black Pear of Worcestershire—although seldom met with nowadays, said by tradition to be the Pear represented on the city arms—the date of which is uncertain, but in all probability coincides with that of the visit of Queen Elizabeth to Worcester. It is also beyond dispute that orchards flourished in conjunction with the monasteries, for we read that the monks

* Paper read at Worcester Shire Hall before a conference of fruit growers of the county of Worcester.

had a special object in establishing themselves in situations favourable to fruit growing.

Enough has been said to prove how Worcestershire orchards flourished in bygone days; therefore it will be more interesting for this conference to trace out

The Cause of the Decline

as well as to suggest a remedy. Two hundred years ago it was the necessities of isolation that caused orchards to be looked at as a source of profit by the manufacture of cider and perry, but to-day it is a world-wide competition that makes a similar demand. Thus it happens by a curious revolution in the cycle of commerce that the careful and skilful cultivation of our orchards has again become a necessity, and every effort must be made to improve the condition and to make them, as undoubtedly they can be made by proper application of skill and industry, one of the main sources of profit from the land. Orchards in those days were in the hands of the ordinary farmers, and it is more than probable that the decline of fruit growing arose partly from the prosperity of the country, and partly owing to a vexatious tax upon the beverages, combined with the introduction of cheap foreign but unwholesome wines. Agriculture was then prosperous, and it became more profitable to produce corn and cattle; consequently knowledge of orchard cultivation diminished and was neglected, whilst practical experience completely died out, facts which will take a generation to restore, for certain it is that at the present day there can scarcely be found a single workman whose employment is chiefly agricultural who possesses the slightest rudimentary knowledge of the requirements of a fruit tree's roots or branches. With a few exceptions, practical, sound knowledge is very little advanced in the ordinary farmer, and, as a rule, he belongs to rather a difficult class to instruct, as he does not take kindly to fruit growing. Whilst on this treacherous and divided part of my subject, I feel convinced that very great injury is frequently done to fruit growing by men who call themselves gardeners and represent themselves qualified to give advice and to undertake the management of fruit trees, but whose real knowledge of planting, pruning, the nature of soils, the selection of varieties and the many other details necessary is about as remote as the North Pole. It will thus be plain that before we can restore the prosperity of our orchards, able to produce with a certainty (occasional bad seasons excepted) immense quantities of fruit of the highest standard of excellence, fit to compete openly with our foreign rivals, very considerable knowledge will have to be extended to occupiers of the land. The increasing demands for fresh fruit from the growing populations of our large towns and the great discoveries of the present century have completely revolutionised all former experience. The forces of steam and electricity by land and sea enable space to be overcome by rapidity in transit, and lessen expenditure by gain on time and cheapness of conveyance, opening out wider markets for all articles of trade. We have to meet a world-wide competition in which, according to the inevitable laws of Nature, the best and cheapest must prevail. The benefit to the community at large is unquestionable, but to class interests and localities the results are sometimes disastrous. Agriculture, we know, is now sorely tried to contend with these changes, and the struggle increases in intensity. The result cannot be otherwise than to compel every district to produce those articles for which it is specially adapted in the very best possible form by the very highest system of cultivation. If free trade in corn, with its free freight and indirect bounty and the introduction of foreign live and dead meat, make the home production of these articles unprofitable and ruinous to the agriculturist, then why should not those living in the districts in every way suitable for fruit growing, as Worcestershire undoubtedly is, expend their capital upon orchard planting? In order to be a financial success this must be done in no half-hearted way. I wish to see capitalists with sufficient enterprise planting their 50 acres of Cox's Orange Pippin, another 50 of Lord Suffield, another 50 of Dumelow's Seedling and so on. In conjunction with Apples, Pears, and Plums, Cherries, Strawberries, Raspberries, Currants, Gooseberries, &c., should be planted and the whole of the land attempted given over to fruit growing. For a county like Worcester to import foreign Apples is considerably worse than carrying coals to Newcastle, and I repeat that it is a standing disgrace to county fruit growers to quietly stand by and see the in every way inferior (colour excepted) American Baldwins and other kinds of Apples that have travelled thousands of miles by road and sea sold at our very doors for 3d. or 4d. per lb., whilst our own home orchards remain in the most deplorable plight. To continue grumbling at this sad state of things, and to wait for protection or some other salvator to turn up, is unworthy of true British pluck and indomitable enterprise. There can be no mistake, fruit growing is not played out and will pay, if set about in a proper skilful manner, but depend upon it the only way to beat the foreigner is to put better fruit than his on the market. I willingly admit France and the Channel Islands with their superior climate will always beat us for Pears; still even this is not hopeless; but as regards all our soft fruits we have nothing to fear from the importations except jam, which in time will right itself by legislation. There is also the cider and perry industry; properly manufactured on improved scientific lines both wholesome and good as well as economising the use of the small or inferior fruit, would assist the financial resources of the orchard. In order to compare the style of

Foreign Fruit Growing

with our own, I would mention the experience of a friend whose business relations have taken him through the United States and Canada annually for the last eighteen years. He says, "Twenty years ago a fruit orchard of 50 acres was then a wonder, but now in numerous States Apple, Pear and Peach orchards, 100 acres, 200 acres and 300 acres in extent, are common enough, and planting continues. In the State of Colorado, for instance, the first Apple tree was planted in 1863; now there are 30,000 acres in full bearing." He instances one planter who has 80 acres of Bartlet Pears—a Pear similar to our William's, the most risky and treacherous of all Pears as regards its ripening and early decay. Evidently there is a demand for this Pear somewhere. My quondam friend further assures me that systematical cultivation worthy the name is carried out there thoroughly, as taught by practical experience; also considerable knowledge in the early application of insecticides and fungicides to the trees, by spraying or washing. The fruit is honestly graded and carefully packed, with the grower's brand upon each package. Possibly there may be slight advantages in climate, virgin soil, &c., but if we contrast all this with the system pursued in our own Worcestershire orchards, we shall have little difficulty in arriving at the conclusion why foreign Apples are so often preferred to home-grown ones.

There is an old saying that "comparisons are odious," and I feel sure that the truth of that old saying will be realised and exposed if I venture to describe the

Condition of our Orchards.

Some farmers think they have done everything when they have planted the trees—stuffed the roots into small holes would be the proper description—they do not imagine there is any art in fruit cultivation, pruning, dealing with insects, grading or packing. Frequently the trees are unskilfully staked and injured by wind chafing. Cattle, rabbits and other depredators obtain access to the trees, and irreparable damage is often done. What few trees survive such reprehensible treatment in time become profitless examples of bad usage, and demonstrate as clearly as possible how not to do it, whilst as regards our older orchards nearly every tree is a living picture of sheer neglect. Its branches are a thicket of dead and decaying wood, languishing from want of light by a little systematic thinning out and attention. The trunks and limbs are overgrown with Moss and Lichen, becoming practically the undisturbed breeding quarters of mischievous insects, which in due season sally forth in myriads to make raids upon all trees in the land, whether belonging to the careful or to the careless cultivator alike—a very bitter experience to some of us. It will be found that in the struggle for life these wretched old trees occasionally bear a few specked and ill-conditioned fruit at the extremities of their branches, which are generally sold for a lump sum as they stand on the trees to some promiscuous fruit dealer, who, of course, has no scruples for the trees at gathering time, for he roughly shakes them or beats the Apples off, collects them into pot hampers, and rushes them into market—good, bad and indifferent, bruised or unbruised alike—there to represent Worcestershire orchard-grown fruit, whilst the price realised is pointed out to us by our pessimistic friends as the unprofitableness of fruit growing. It is but a very few years ago since the growers of Grapes for market were in a similar predicament to Apple growers of the present day. The Channel Islanders then monopolised the Grape market, very much the same as the Yankees and colonials now do the Apple market, and very much to their own advantage, no doubt; but here, again, necessity became the mother of invention, for it was discovered by shrewd, practical men with brains and possessing true British enterprise that equal or superior Grapes could be produced in prodigious quantities with the help of cheap glass-houses close to the world's market, without the disadvantages of long transit by road and sea, at a cost that completely placed the foreigner *hors de combat*. It remains to be proved why we cannot repeat the process (less the glass houses) as regards the foreign Apple trade, at all events for a large portion of the year. I firmly believe we shall do so ultimately, but we have to first take decided steps by placing our orchards in a position capable of producing first-class fruit; the climate and soil will do that, provided the necessary skill and capital are forthcoming. There are men constantly telling us fruit growing will not pay until the land each man holds or occupies must be as good as his own; but surely at the present time there is no difficulty in that direction, for seeing the many acres of land going out of cultivation, much of which would be suitable for fruit growing, landlords would gladly encourage the object and be very glad to give the necessary security of tenure with all the advantages of recent legislation, such as small holdings, compensation for unexhausted improvements, and the like; indeed, in some cases they are prepared to supply trees gratuitously to competent tenants at fair rents. This system of gratuitous distribution of trees has been in operation on the Madresfield estate for about twelve years, by means of a home nursery set apart for this special purpose, and upwards of 1000 trees have been dispensed annually. The results so far have been very fluctuating, generally in accordance with the capabilities of the recipient; here and there splendid samples of orchard fruit have been and are now produced, and the trees well cared for, but in the greater number of cases opposite results are noticeable, and discouraging too. Of course, it is only well-proved varieties that are distributed, whether new or old, whilst my own modesty prevents me saying more than to simply mention that the few specimens I have to-day staged in this hall are fair samples of fruit grown under ordinary cultivation on bush trees, and not taken from trees set apart for show purposes, which sometimes spend part of their time under glass, showing for competition being prohibited at Madresfield. I have already pointed out that before we can succeed, as we all desire, we must first improve our methods of cultivation; therefore I presume it will be expected of me to give some description

how this can best be accomplished and what kinds of trees I consider best adapted for that purpose. There can be no doubt that the old-fashioned standard is capable of producing perhaps the greatest quantity of fruit, but, on the other hand, the fruit produced is certainly inferior in quality, size and appearance to that given by the more easily managed dwarf, or loose, open, bush kind of tree; by this, and to be explicit, I do not mean the little pigmy bushes grafted on Paradise or other dwarfing stocks, but the large, open, bush form trees on free stocks that have been carefully prepared in their youthful days, and now possess an abundance of healthy fibrous roots that work and feed near the surface, whose branches are each a perfect cordon of fruiting wood throughout, from the stem of the tree right out to the extremity of each branch. Surely we must admit each tree is worthy of the ground it occupies, although I fear many of us act differently, and I never could see the object of sticking our trees up on stilts, as it were, whereas better results could be obtained, greater access and convenience gained in pruning, spraying, gathering or thinning, and the numerous other attentions necessary would be facilitated without the stilts. Moreover, the aforesaid fibrous roots' requirements could be better dealt with, the necessary manures or plant foods could be more efficiently applied, and with the absolute certainty that the right parties appropriated it. The land for at least the diameter of the tree's branches should, therefore, always be held sacred to the roots, for we have no right to try for or to expect Grass or other crop upon this space. Curiously, it seems to be generally overlooked that attention to the roots is equal or of more importance than the branches, and it is this encouragement of this network of fibrous close-to-surface roots that demands our most earnest consideration, for, depend upon it, unless properly cared for, the trees cannot ripen their wood and perfectly develop their embryo fruit buds for next year's service. This failure to ripen up in the autumn is aggravated by the absence of sunshine during the summer, and is usually followed by the imperfectly formed flowers in the next spring, wholesale dropping off occurs and the inevitable failure of crop. It will, therefore, be conceded this most important detail cannot be too strongly impressed. Trees of this character may be planted at from 6 feet to 8 feet apart, or more, and alternate trees removed to a fresh plantation later on, for trees with good fibrous roots are always fruitful and can be easily removed with perfect safety and comparatively little check. We do not increase the area nor gain any other advantage by the old and, I hope, obsolete system of perching our trees on stilts, and I conscientiously maintain that an acre of before-described bush trees will give far and away better results than the old-fashioned standards; moreover, they fruit earlier and are better from every point of view.

I am hopeful, nay, sanguine, that the millennium of all this is in the near future, that is, when the small holdings become more perfect and general, such orchards will rise and spring up like Mushrooms, which if combined with large depôts for the distribution of the produce and conducted on joint stock principles, or an extended system of co-operation, where a quantity of these plodding small growers could concentrate and husband their resources, so as to place their products with a degree of certainty and reliability constantly within touch of the public requirements of the day. These depôts, or under-ground cellars, being best for storing, should be arranged for as near as practicable to competitive railways, for obvious reasons, with a central office in London or elsewhere, thus in direct communication with all retailers of fruit, and ready to supply 1 cwt. or 100 tons of any special variety of hardy fruit to order. To further speculate upon the all-round advantages of such a system and the huge home industry it would create would, I fear, be encroaching upon matters which will, I trust, be far more ably dealt with by the writers of other papers promised at this conference. Nothing has yet been mentioned as to the properties of soils, situations, shelter, natural drainage or otherwise, which are most suitable for the various crops of fruit attempted, all questions of supreme importance to the cultivator, but I fear my paper is already too long to allow me to enter into in detail.

Take care that the land is clean, in good heart and deeply cultivated before planting, for land that has been sub-soiled and deeply ploughed or trenched, if spade husbandry is pursued, has the advantage of becoming warmer by atmospheric influences of sun and air. The rain also finds its way more readily into Nature's storehouse, there held in suspension, ready to be drawn upon in times of drought. If possible choose a site other than a low valley, for although the best soils are usually found there, fatal spring frosts are worst in such positions. Shelter from high winds has obvious advantages, but is of less importance. Let the trees be clean, healthy and good, avoiding those which have been grown thickly together in rows, consequently cheap, and do not lose sight of the fact that it is good, all-round trees only that produce good, clean, well-coloured and large-sized fruit fit to compete openly with and, I sincerely hope, ultimately oust the foreign importations by the next generation probably. Anyhow, the wish is father to the thought, personally, and it is an encouraging sign of the times (for which we are all very grateful) to see the subject appreciated and helped on by the County Council, through the horticultural section of technical education; whilst I sincerely hope both they and this conference of fruit growers may ultimately feel amply justified by results, direct or indirect, actions not words, of this their first meeting, thereby becoming a great power in restoring the balance of our agricultural population by opening out a new industry on a large scale, and if this is accomplished (as I predict it will be) no one will rejoice more than myself to see fruit culture extended and our Worcestershire orchards permanently improved.

Rose Garden.

ROSES AT BATH.

The Rose nurseries of Messrs. Cooling are situated on a pleasant slope not far out of Bath, and though not so extensive as those about Colchester, they are well worth a visit, especially from those who grow or love to see the Rose in all its varied types of beauty. The garden or nursery that only contains show Roses represents but one class of flower, but we are pleased to see abundant evidence of the growing popularity of those that are termed garden Roses, varieties whose charms are great. A host of these old and new kinds and, in fact, all that are worth growing find a home in these nurseries and there is a growing demand for them. It is strange that they should ever have been neglected, since no cultural skill is required to bring them to perfection, and in their season no flowering shrub can compare with them in sweetness and gay display of colour. Unfortunately, our visit was too late to enable us to see the picture they must have made but a short time previously, for there were Roses of all ages, kinds and sizes, from the little De Meaux and Spong up to great bushy pyramids of such strong growers as Mme. d'Arblay and Félicité-Perpétue. Some, however, were still in full bloom and demanding notice. Among these is Mme. Alfred Carrière, a Rose by no means new, but one that for some reason has not found many admirers. It is a robust grower, making a huge bush or covering a wall rapidly, and flowering long and abundantly, the blooms pale flesh and deliciously scented. Bardou Job would make a brilliant group in the garden, the plants bearing a long succession of crimson buds and blooms.

A very charming single scarlet Rose raised by Messrs. Cooling will shortly be sent out, named Glare of the Garden. It has the habit of growth of the Hybrid Perpetuals, free and robust, not climbing in habit, though doubtless with age it would grow into a large bush. The flowers are quite single, very large, borne in clusters, and of a glowing crimson colour. The new Sweet Briers are largely grown here, but Mr. Cooling thinks, as many more do, that there are far too many of them with distinctive names, although Lady Penzance is a welcome acquisition for its distinct colour. Janet's Pride, one of the older kinds, is also good, and we saw immense bushes of it. Mme. Trochon, very pretty here, with white buds in clusters, might be described as a white W. A. Richardson. Mme. Pernet-Ducher, Mme. Pierre Cochet, and Gustave Regis, all recent varieties of the most free-flowering character, are bound to become popular garden Roses of the future. The good and sweet old Celine Forestier we saw in quantity. Two varieties that the year has favoured and which were covered with many tinted flowers are Jaune Desprez and Ophirie. We have so many really first-rate Roses as free as these two kinds and more to be depended upon in the average season, that they have not the value they once had and, if dispensed with, would scarcely be missed.

Two new Roses raised here impressed us much more favourably than when we saw them at the Crystal Palace recently, especially that named Bladud. A row of plants of this variety was very striking, every shoot standing erect, crowned with a large flower of wonderful substance. Although extra full and double, the flowers have expanded well; they are of globular form, high in the centre, blush-white in colour. The other variety, named Lawrence Allen, is equally free and robust, its flowers full, large, and of a light pink colour. The heat and drought have suited certain Roses, and among these is Horace Vernet, which had numbers of perfect richly-coloured flowers. A. K. Williams, Ulrich Brunner and Mrs. John Laing were also in fine form.

Tea Roses

were numerous in all the best varieties. A recent variety, Beauté Inconstante, was specially good, most distinct and charming in colour, but essentially a garden Rose, the flowers of that peculiar indescribable copper-yellow and bronzy red hue that attracts notice by reason of its novelty as well as its striking beauty. Adrienne Christophle rejoicing in the sunshine bore flowers of the brightest hues characteristic of this many-tinted Rose; great blooms of Jean Ducher were conspicuous; whilst Ethel Brownlow and Mme. Cusin were certainly brighter and better for the tropical sun that had brought them out. The dry summer following the severe cold has had a fatal effect upon stocks for this year's budding in many places. Messrs. Cooling are fortunate, however, in possessing the best lot we have seen anywhere this season, and the reason is not far to seek, for what at the time threatened to be a grave disaster has doubtless been a blessing. Bath suffered greatly from last winter's floods, and the stock quarters were inundated with water several feet deep. This left the ground so saturated, that water has not been so essential as it would otherwise have been.

Societies and Exhibitions.

ROYAL HORTICULTURAL SOCIETY.

July 23.

The meeting on Tuesday last was an interesting one although the exhibits were fewer, considerably less space being occupied than for some time past. Orchids showed the greatest falling off, but hardy flowers were well represented, and Sweet Peas in three comprehensive groups were a feature in themselves. Among fruits, Gooseberries largely predominated, grand Madresfield Court Grapes were shown, and the large exhibit of Duke of York Tomato testified to the high merits of this new variety.

Orchid Committee.

First-class certificates were awarded to the following :—

Phalænopsis Ludde-violacea, a hybrid raised by Mr. Seden from P. Luddemanniana × P. violacea. The plant had six strong leaves and partook more of the habit of P. Luddemanniana than the other parent. The flower also resembled that of P. Luddemanniana to a great extent, the sepals and petals rose-purple barred with a darker shade ; lip dark crimson with a yellow disc. From Messrs. Veitch and Sons.

Lælia (Brassavola) Digbyana.—An old and well-known plant, but no record exists in the society's list of its having been previously certificated. The sepals and petals are greenish yellow, lip of the same colour, having a heavy woolly fringe in front.

Awards of merit were adjudged to the following :—

Dendrobium speciosissimum.—This species was awarded a botanical certificate at the previous meeting, but being shown now in better condition it received the above award. In habit of growth and in the shape of the flowers it resembles D. Jamesianum, the sepals and petals pure white, lip white with a yellow disc, changing to pink in the throat. From Messrs. F. Sander and Co. and Messrs. Hugh Low and Co.

Angræcum Eichlerianum.—A distinct and beautiful addition to the genus ; sepals and petals each 1½ inches long, pale green ; lip white in front, with a pea-green centre. From Messrs. F. Sander and Co.

Dendrobium porphyrogastrum. — A hybrid between D. Dalhousianum and D. Huttoni ; sepals and petals lilac, veined with a darker shade ; lip rose-lilac in front, with a large dark purple disc. From Messrs. Veitch and Sons.

Botanical certificates were awarded to—

Mormodes pardinum, an old well-known species, with yellow flowers, thickly spotted with brown. From Mr. F. W. Moore, Botanic Gardens, Glasnevin. Maxillaria Hubschi, a distinct species, sepals and petals white, tipped with purple, lip yellow in front, side lobes brownish purple. From Mr. F. W. Moore. Habenaria rhodocheila, a new species, sepals and petals green, lip vermilion-scarlet ; a distinct and beautiful addition. From Sir T. Lawrence, Bart. Eria latibracta, a distinct form of this somewhat despised genus, with creamy yellow sepals and petals, lip yellow, with brown side lobes. From Messrs. Sander and Co.

Messrs. T. Cripps and Sons, Tunbridge Wells, exhibited a fine group of Disa grandiflora, finely grown and well flowered. A silver Banksian medal was awarded. Messrs. Hugh Low and Co. sent a group, prominent among which were Cattleya Leopoldi in variety, C. Rex, C. Schofieldiana, several plants of C. Eldorado, a fine variety of C. Warscewiczi, Lælia tenebrosa, L.-Cattleya elegans, Dendrobium speciosissimum, Cypripedium Curtisi, C. callosum, C. javanico-superbum, said to have been imported with C. callosum, and Lycaste Rossiana. Messrs. F. Sander and Co. showed a small, but effectively arranged group, comprising Dendrobium Phalænopsis in variety, Stanhopea Mastersi, Cypripedium Aspasia and the supposed natural hybrid C. Kimballianum, Cirrhopetalum picturatum, a large mass, carrying seven fine spikes of flower, Brassia Lewisi, Dendrobium bracteosum and its variety album, Grammatophyllum Measuresianum, a fine dark-spotted variety, Cattleya Gaskelliana (Cook's variety), with pale rose-coloured flowers, C. Warscewiczi in variety, a fine dark variety of Sobralia xantholeuca, Odontoglossum bictonense album, O. purum, Miltonia vexillaria, and Batemannia Burti. Messrs. Veitch and Sons exhibited Dendrobium glomeratum and a very fine variety of Miltonia vexillaria superba. Sir T. Lawrence, Bart., Burford, Dorking, sent Epidendrum alatum. Mr. W. C. Parkes, Lower Tooting, sent a cut spike of Cattleya Warscewiczi carrying five large flowers. Mr. R. I. Measures sent Maxillaria ochroleuca, Bulbophyllum Sanderianum, and a three-flowered spike of Cypripedium Godefroyæ. Mr. J. Foster Alcock sent Lælio-Cattleya elegans Schilleriana. Mr. F. Hardy exhibited a fine made-up specimen of Miltonia vexillaria superba, also M. v. rubella and Cypripedium leucochilum var. Mr. J. Gabriel, Streatham, sent a four-flowered spike of Cattleya Rex. Mr. Walter C. Walker, Winchmore Hill, sent a well-grown plant of Cypripedium Godefroyæ carrying six flowers. Mr. F. W. Moore sent Epidendrum paniculatum, a fine variety of Bulbophyllum Lobbi, and Aerides Lobbi. Mr. E. H. Woodall sent Lælia crispa superba, a cut spike with two fine flowers. Mr. A. Witt, Maida Vale, sent a Dendrobium species in the way of D. clavatum.

Floral Committee.

First-class certificates were granted to the following :—

Campanula Vidali.—A shrubby greenhouse species and an old garden plant, but never probably seen so well grown and flowered as were the plants shown. From Mr. J. T. Bennett-Poë, Holmwood, Cheshunt.

Davallia tenuifolia Burkei.—This is a recent introduction from New Guinea, and will make a lovely stove Fern for growing in baskets or in any position that will show off its graceful drooping fronds, which are long, of a light green and hang down most gracefully, even when the plants are young and small. Shown by Messrs. J. Veitch and Sons, Chelsea.

Lilium japonicum Colchesteri.—This is the true Lilium odorum, and differs appreciably from L. Browni, which is too often substituted for it. It is a grand Lily with a delicious scent. A note pointing out how these two kinds differ appears on another page. From Messrs. R. Wallace and Co., Colchester.

Nymphæa Marliacea Chromatella.—This is the first of M. Marliac's fine series of hardy hybrid Water Lilies, and is now tolerably well known to our readers, as a coloured plate of it was given in The Garden as far back as March 31, 1888. Shown by Messrs. Veitch.

Awards of merit were granted to the following :—

Nymphæa Laydekeri rosea.—Poor flowers of this lovely variety were shown, and few would recognise it to be the same as that figured in The Garden of February 24, 1894. The flowers were in the pale stage of early expansion, and showed no trace of the brilliant colour they develop later. From Messrs. J. Veitch and Sons.

Nymphæa odorata rosea.—This is the rosy-flowered form of the North American Sweet Water Lily, by no means new or rare, being plentiful wild in the Cape Cod district, and known in gardens as the Cape Cod Water Lily. This also came from Messrs. Veitch.

Cirsium eriophorum. — This is a handsome plant of the Thistle tribe, of biennial duration, and not of much importance for gardens. It grows about 6 feet high, the flower-heads being densely covered with a woolly substance, the blooms when expanded of a reddish-purple colour. It was shown by Mr. C. Herrin, The Gardens, Dropmore.

Gladiolus Dutrieul de Rhins.—One of M. Lemoine's fine hybrid varieties of the G. Nanceianus section, having large bold flowers with great breadth of petal, in colour light scarlet, slightly feathered with white, a brilliant and striking kind. From Mr. Bain, gardener to Sir Trevor Lawrence.

Pentstemon hybridus grandiflorus. — The award in this case was made to the entire strain, about a dozen distinct varieties being shown, the flowers of fine size and bright colour, some of the reds being very good and practically self coloured. Also shown by Mr. Bain.

Sweet Pea Lady Grisel Hamilton.—This is a lovely self-coloured kind of a pale lavender-blue shade, the wings deepening into a heliotrope tint. From Mr. H. Eckford, Wem, Salop.

Sweet Pea Blanche Burpee.—A very fine pure white-flowered variety of American origin, and already popular in gardens. From Mr. Eckford.

Sweet Pea Mars.—This also is self coloured, and we are glad to see these distinct kinds singled out for award in preference to the bicolor and tricolor varieties, which are wanting in distinctiveness and effect. Mars has fine flowers of a deep and brilliant shade of carmine-red, a telling colour in the garden or the house. This also came from Mr. Eckford.

A silver Flora medal was granted to Mr. Eckford for a very fine display of Sweet Peas in all his best varieties, each arranged separately in a tall glass vase. In addition to the kinds already mentioned, we noted Royal Rose, soft pink ; Stanley, dark maroon ; Ovid, rosy crimson ; Emily Eckford, a decided blue self ; Duchess of Sutherland, blush ; Mrs. Eckford, cream ; Monarch, purple-blue ; and Countess of Radnor, pale mauve. Mr. W. E. Tidy, Brockhampton Nurseries, Havant, also made a fine display with these sweet flowers, arranging them in a sloping bank naturally and gracefully, the blooms being cut with their shoots. Most of the best kinds in cultivation were also to be seen here, a bronze Flora medal being awarded. A similar award went to Messrs. Dobbie and Co. for a fresh and varied lot of Sweet Peas. The group of hardy flowers from Mr. W. Prichard was noteworthy, the blooms remarkable for their freshness. The best were Coreopsis lanceolata, Chrysanthemum maximum in variety, a seedling form of Mr. Prichard's raising, extra fine ; Helianthus rigidus, Platycodon grandiflorum and P. Mariesi, Campanula rotundifolia alba, Genista tinctoria elata, Spiræa venusta and S. palmata alba, Physostegia virginiana, the type and its pure white form, and Asclepias tuberosa with large trusses of orange-scarlet flowers. Some goood Phloxes were prominent also, especially Pantheon, of a lovely salmon-pink shade ; Jean Bart, rosy crimson ; Figaro, rose-pink ; and W. Robinson, pink, with fine large flowers. A silver Banksian medal was awarded, and a similar award went to Messrs. G. Paul and Son for a group of hardy flowers, those most notable being Sea Hollies, Heliopsis patula and H. scabra, with rough stems and deeper orange flowers than those of H. patula, Rudbeckia purpurea, Campanula carpatica Robert Parker, Phloxes, and Veronicas. Several fine new Cannas also came from Messrs. Paul, one variety less than 1 foot in height, yet flowering abundantly. Messrs. R. Wallace and Co., of Colchester, again showed some fine Lilies, a quantity of L. chalcedonicum, conspicuously bright, its scarlet flowers in striking contrast to those of the others shown, which included L. auratum, L. longiflorum, L. japonicum Colchesteri, L. Browni and others. Their new Day Lily was again shown, and two charming Calochorti that have not been seen before this season, namely, C. Plummeræ, which has large deep lilac flowers, clothed at the base with long yellow hairs, and C. Weedi, which is yellow, with hairs distributed all over the inner surface of the petals and forming a characteristic fringe upon their edge as well. A silver Banksian medal was awarded. Mr. Cannell received a like award for a charming group of Carnations and Picotees, the best self being Cannell's Scarlet, very bright ; F. T. Tasker, light red ; Mephisto, dark crimson ; and Miss Mary Dyke, yellow ; whilst Picotees worthy of note were Brunette, Esther, Mrs. Sharp, Mr Dodwell, Favourite and Mrs. C. J. Shaw, new an

very pretty, with a light crimson edge. Canna Queen Charlotte was also well shown by Mr. Cannell. Messrs. Peed and Sons were awarded a bronze Flora medal for a good group of Gloxinias in variety, self and spotted kinds. Messrs. J. Veitch and Sons showed a group of the Javanese Rhododendrons made up of small plants comprising the best varieties, and sent to show that these beautiful greenhouse shrubs flower freely in quite a young state. A silver Banksian medal was awarded. Messrs. Cripps, of Tunbridge Wells, showed Mutisia decurrens and Schubertia grandiflora in flower, receiving a bronze Banksian medal; whilst similar awards went to Mr. Walker, of Percy Lodge, Winchmore Hill, for Achimenes, and to Messrs. Webb and Brand, of Saffron Walden, for a few spikes of double Hollyhocks. Salpiglossis was finely shown by Mr. Bain, gardener to Sir Trevor Lawrence; and Cockscombs came from Messrs. W. Cutbush and Sons. Mr. F. W. Moore, of the Botanic Garden, Glasnevin, was accorded a vote of thanks for handsome flower-spikes of Crinum Powelli and its pure white form; C. yennense, which has a long tubular pure white flower, its segments broad and bluntly pointed; Agapanthus minor and A. Mooreanus all cut from the open ground. Mr. J. T. Poë again showed Browallia Jamesoni, the same plants as appeared in the spring, but which have since been planted out in the open ground and lifted. Mr. C. Herrin showed a fine bunch of a handsome sweet-scented Carnation named Dropmore Clove, and Mr. R. P. Brotherston sent Germania in fine form from Tyninghame, where it does so well. Mr. Mount, of Canterbury, showed a bunch of a scarlet self named Nora. Gloxinia Holborn Gem is a spotted variety shown by Messrs. Carter, of High Holborn. Messrs. J. Laing and Sons exhibited several of their new double-flowered Begonias and two new Caladiums, and Mr. G. Farini, of Forest Hill, showed Begonias. Begonia Duke of York, a fine coloured leaved variety of tall growth, was shown by Messrs. Sander, who recommend it for training up pillars, and a double-flowered variety named Marquis of Londonderry was sent by Mr. Rowntree, of Norton, Stockton-on-Tees. Pansies, especially the lovely varieties of Dr. Stuart's raising, were admirably shown by Mr. W. Baxter, of Woking.

Fruit Committee.

There were some fine exhibits of fruit before this committee. Probably the best collection of Gooseberries ever staged was sent by Messrs. Veitch. There were also some excellent Tomatoes and Peas.

A first-class certificate was awarded to—

Tomato Duke of York.—A very handsome fruit, quite smooth, round, and of great depth, rich scarlet in colour, and a tremendous cropper. The fruits are very solid and of first-class flavour. From Mr. Ryder, Northumberland Nurseries, Orpington.

Messrs. Veitch and Sons, Royal Exotic Nurseries, Chelsea, staged a very fine collection (some 150 varieties) of Gooseberries, cordon growths of the same being arranged at the back of the dishes. Currants in variety were also staged, with four boxes of Cherries. The best Gooseberries were Highlander, Speedwell, Crown Bob, Lion, Monarch, Wonderful, Magnet, and Washington among the red kinds. Of yellows, Candidate, Drill, Lady Houghton, Leviathan, Railway, Traveller, and Trumpeter were very fine. The best green kinds were Fearless, Green Overall, Keepsake, Lofty, Matchless, Shiner, Souter Johnny, Stockwell, Telegraph, Waggoner, and Weathercock, the best white kinds being Alma, Antagonist, Eagle, Freedom, and Overseer. The Red Currants were notable for size, the best kinds being La Versaillaise, La Constante, Cherry, and Large Grape (silver-gilt Knightian medal). Mr. J. Walker, Thame, Oxon, staged some forty dishes of Gooseberries and three of Currant, Walker's Magnum Bonum, a large red kind somewhat like the Cherry. The Gooseberries were very fine, the best being Lord Derby, Snowdrift, Drill, Fascination, Clayton, Overall, and Australia (silver Banksian medal). Mr. Peters, Given Grove Gardens, Leatherhead, staged twenty-four varieties of Gooseberries, all good and well set up, the fruits being noted for their clean appearance. The varieties in many cases were those noted in the previous collection. They well merited the award given (silver Banksian medal). Some very fine Madresfield Court Grapes were sent by Messrs. Wells, Hattonhurst, Hounslow, the berries large and well coloured (silver Banksian medal).

Messrs. Johnson, Boston, Lincoln, sent forty varieties of Peas, mostly large kinds, their new Boston Unrivalled being among the number. This is a very fine Pea, and was requested to be sent to Chiswick for trial. Such varieties as Gradus, Goliath, Gladiator, Epicure, Duke of York, Daisy, The Queen, Wem, Stratagem and Critic were very fine. There were also good dishes of Longpod and Exhibition Broad Beans (silver Banksian medal). From Mr. Carmichael, Pitt Street, Edinburgh, were sent seedling Strawberries, the results of crosses from Waterloo, Elton Pine and British Queen. The committee desired plants to be sent to Chiswick to test cropping qualities, the flavour being considered very good. Mr. Gilbert, Burghley Gardens, Stamford, sent very large Peaches, the variety being Late Admirable. The same exhibitor also sent seedling Cucumbers; these were requested to be sent for trial. From Dr. King, Spalding, Lincoln, was sent a seedling Tomato, but too much like Dedham Favourite. Messrs. Letellier et fils, Caen, France, sent young Gooseberry trees, quite spineless, the fruit also being staged, but not noted for high quality. Messrs. Veitch sent a promising new Nectarine named Précoce de Croncels. It is stated to be the earliest Nectarine grown and is a nice-looking fruit. It was, however, much too ripe. The same firm sent early Pears, Doyenné d'Ete, Citron des Carmes, and Jargonelle (not ripe), and Mr. Gladstone and Red Juneating or Early Margaret Apples. New seedling Melons were sent by Mr. Thomas, Frogmore, and Mr. Wythes, Syon House. Mr. Bain, Burford Lodge Gardens, Dorking, sent a variety of edible podded Peas. From the Jadoo Fibre Co., Teignmouth, was sent a sample of Potatoes grown in the fibre. This was most interesting, there being a heavy crop of tubers and beautifully clear in the skin, showing the value of this material for forcing. Mr. Ross, Welford Park, Newbury, sent a new seedling Cherry, but too ripe. Filberts that had been kept since the 1893 crop were sent by Mr. Griffiths, Bilston, in a very fine state of preservation.

The lecture on "The Carnation in Scotland" was read by the secretary in the absence of Mr. R. P. Brotherston, who prefaced his paper by quotations from writers of 300 years ago, which proved that even in those days it was a popular flower, and in the estimation of those who grew it was counted next in importance to the Rose, a position it as worthily fills to-day. It was remarked incidentally as a curious fact that certain varieties which do well in Scotland, producing full and large flowers, fail to do so in the south of England, Mrs. Muir being one of them, whilst, on the other hand, Cantab, which is a sweet and perfect kind in the south, gave in Scotland poor, loose, shapeless flowers. These were exceptions, however, and as a general rule most of the best kinds of the day were found to do very well indeed. In the practical details of culture special importance was attached to the necessity of early layering and early planting. The first layers this season were put down three weeks ago and the work was completed in ten days. The time for planting was the first and second week in September, as this enabled the plants to get a firm root-hold before the winter. Firm planting was most important, but after sundry experiments he had come to the conclusion that deep planting was wrong and opposed to the natural requirements of the plant, which was really of a shrubby character. The best results came from short-stemmed layers that had the roots firm in the surface soil. As regards manure, it was doubtful if it was ever beneficial, and at any rate in a fresh state should never be applied to ground shortly to be planted with Carnations. If food was needed it would be best supplied through the agency of one or other of the chemical manures, but he had been very successful with Carnations following Potatoes, and in his case it was not even necessary to dig the ground again. For yellow Carnations it was advisable to give a good dressing of good leaf-mould and, if possible, raise the bed 2 inches or 3 inches above the surrounding level. He also practised and would advocate thinning, not only of the buds, but flowering stems and grass as well. The diseases that troubled growers in the north were fewer than those that afflicted southern growers, the most troublesome being a little eel-worm, whilst they had besides to contend with green-fly, which at times was very troublesome. As regards varieties, those of German origin were sturdy and had well-made flowers, but there were few suitable for gardens. The French kinds were lovely as garden flowers, but the tendency of most of the flowers was to droop. In the English varieties were to be found all one could desire—noble, sweet and distinct sorts that held their flowers up well.

NATIONAL CARNATION SOCIETY.

July 24.

This show on Wednesday in interest and extent exceeded the expectations of the most sanguine supporters of the society, and quite justified the new departure that has been made in making it a special fixture. It has for many years past been held in conjunction with the R.H.S. meetings, but latterly there has been too much crowding of the exhibits in the limited space that the Drill Hall affords. Through removing it to the Palace the society was enabled to add one or two additional features, as, for example, dinner-table decorations of Carnations, which brought out a spirited competition. Altogether we do not remember to have seen a more interesting show of Carnations, and it was all the more creditable by reason of the unfavourable season that has severely handicapped many growers. As a matter of fact, most southern growers found the date too late, and consequently there was a manifest change of places in the premier classes, most of the leading prizes going to midland growers in and about Birmingham, and among these Mr. Robert Sydenham carried all before him with his stands of magnificent flowers.

For twenty-four blooms, flakes and bizarres only, in not less than twelve dissimilar varieties, Mr. R. Sydenham was a good first, the exhibit having very fine flowers of Mrs. Kingston, George Melville, Sarah Payne, Lord Salisbury, Thalia, Othello and Robert Houlgrave. Messrs. Thomson, of Sparkhill, Birmingham, were second, and Mr. Turner, Slough, third. For twelve dissimilar flakes and bizarres, Mr. A. R. Brown, Handsworth, Birmingham, was first, showing fine flowers of Thalia, Harmony, Lord Salisbury, Thaddeus and George Melville. The second prize was secured by Mr. C. Phillips, Bracknell, Berks. Mr. W. Spencer, junr., Barnet, was first, and Mr. J. Keen, Southampton, second, for six varieties of flakes and bizarres. Mr. R. Sydenham secured the premier place for twenty-four Picotees, white ground, in not less than twelve varieties. These, like the flakes, were a grand lot of flowers alike in size and finish. The best were Ganymede, heavily edged red; Favourite, light red-edged; Mrs. Kingston, purple-edged; and Little Phil, rose-edged. Mr. C. Turner was second, and Messrs. Thomson third. Mr. Brown came to the front again with the best twelve Picotees, good flowers of Little Phil, Ne Plus Ultra, Brunette, Favourite and Emma Geggie being prominent. Mr. M. Rowan, of Clapham, was second, with smaller, but fresh and charming flowers. The best six dissimilar Picotees came from another Birmingham grower, namely, Mr. A. W. Jones, of Handsworth; Mr. W. Spencer, junr., was

second. For twelve dissimilar yellow ground Picotees, Mr. C. Blick, gardener to Mr. Martin Smith, Hayes, Kent, was first with a splendid lot, showing very fine flowers of Voltaire, Golden Eagle, Countess of Jersey, Mrs. R. Sydenham and President Carnot. Mr. C. Turner and Mr. J. Douglas were second and third. Mr. A. R. Brown, Handsworth, was first for six yellow ground Picotees, and Mr. W. Spencer, junr., second.

In the large class for twenty-four self and fancy varieties, not less than twelve distinct, which usually contains some of the best flowers shown, Mr. C. Blick was a good first with large fresh flowers. The best were Waterwitch and Sea Eagle, blush selfs; Eudoxia, rose; Duke of Orleans, yellow; Mrs. Eric Hambro, white, all selfs, with Almira, Voltaire, and Eldorado in fancy kinds. Mr. C. Turner was second and Mr. J. Douglas third. Mr. R. Sydenham was again first for twelve self and fancy kinds, Cardinal Wolsey, Mrs. Audrey Campbell, yellow; Corinna, yellow; Uncle Tom, dark clove crimson, extra fine; and Ruby, deep rose, being noteworthy. Mr. J. Walker, of Thame, was second, and Mr. C. Harden, Ash, Dover, third. The best six in these varieties came from Mr. Jones, of Handsworth, a first-rate lot of flowers, the second prize falling to Mr. Ffoulkes, Northgate House, Chester. Mrs. Orr, Bedford, was first for six Carnations and Picotees amongst those who had never previously taken a prize, Mr. E. Colby-Sharpin, Bedford, being second. Mr. Jones was first with Germania for the best self in any colour, and Mr. Sydenham second with Uncle Tom. In the corresponding class for fancies, Mr. C. Turner was first with Primrose Dame, and Mr. A. Spurling, Blackheath Park, second. For two cut flowers of any seedling raised from seed supplied by the society, and shown with their own foliage, Mr. E. Colby-Sharpin was first, with a deep apricot self, and Mr. J. F. Kew, of Southend, second.

The only exhibit in the class for twelve specimen plants carrying a good head of flowers was from Mr. C. Blick, but this lot was superb, the plants carrying from twenty to forty grand flowers, fine examples of cultural skill. For a group of Carnations arranged in a given space, Mr. C. Blick was again first with a more striking lot still, the plants and the flowers they bore remarkably fine, all of them being varieties raised at Mr. Martin-Smith's. Mr. J. Douglas was first for a smaller group and Mr. Charrington, Chislehurst, second. The dinner table arranged as for twelve persons brought out six or seven competitors, premier honours falling to Mr. Blick, but the high quality of the flowers was the chief feature of this arrangement, and the general opinion was that it was too heavy and overdone. For lightness and beauty as well, we very much preferred the table arranged by Mr. F. Seale, of Sevenoaks, to which the second prize was awarded. The best vase of Carnations came from Mr. M. V. Charrington, Hever, Edenbridge, and here we were glad to note that the judges had passed over the laboured arrangements of Carnations and Maiden-hair Fern in fanciful glasses and given the premier award to a vase of flowers and grass that was simplicity itself. Mr. C. Blick had the best sprays and button-holes, being awarded first in both classes.

The Turner Memorial prize, a cup of the value of £5, open to amateurs only, was well won by Mr. M. Rowan, who reserved his strength for this class and succeeded in beating Mr. C. Blick. Twelve bizarre and flake Carnations and twelve Picotees were shown, and Mr. Rowan's were a good lot, the more creditable because grown in a London garden. Mr. Douglas had the best crimson bizarre, and Mr. R. Sydenham the best pink and purple bizarre. The finest scarlet flaked Carnation came from Mr. Phillips, and Mr. Rowan showed the best purple and the best rose flaked varieties. Mr. Sydenham was first for heavy rose-edged, heavy purple-edged, light rose-edged and light scarlet-edged Picotees, Mr. Turner being first for a heavy scarlet-edged flower. The best heavy red-edged and light red-edged varieties were shown by Mr. Jones. For twelve Carnations of any class, each with a spray of Carnation foliage, Mr. Spurling was first and Mr. Harden second, and in the corresponding class for six the prizes went to Mr. J. F. Kew and Mr. Chaundy, Oxford.

The Martin-Smith prizes again brought out some admirable varieties. Mr. Douglas was first for the best border kind, showing a fine dark crimson self. Mr. A. Spurling was second with a scarlet self named Paradox, and Mr. G. H. Sage of Ham House Gardens, was placed third with a lovely blush white variety, that perhaps merited a higher position by reason of its delightful scent, a quality all too rare in modern kinds. Mr. A. Spurling was first for six self border varieties, showing Paradox, scarlet; J. D. Pawle, yellow; Major, rose, and good seedlings. Mr. J. Douglas was second, and Mr. H. W. Weguelin, Shaldon, Teignmouth, third. The best nine garden varieties in flaked and fancy colours came from Mr. J. Douglas, Mr. A. J. Sanders, Bookham Lodge Gardens, being second, and Mr. H. W. Weguelin third. M. Ernest Benary sent from Germany a group of pot plants, embracing self and fancy kinds, but the best of them a long way behind the English varieties. Mr. T. S. Ware made a fine display with border Carnations in bunches in great variety, and Mr. Cannell also showed these well, and Begonias besides. Mr. Blick also had a very large exhibit of all the best kinds now grown in Mr. Martin-Smith's garden, and his method of arranging them might with advantage be imitated by others who bunch them up in a very stiff, formal way, and use Gypsophila to remedy the bad arrangement.

Other miscellaneous contributions consisted of hardy flowers largely and well shown by Mr. B. Ladhams, of Southampton, and Mr. M. Prichard, of Christchurch, also Sweet Peas in quantity from Mr. H. Eckford, Wem, Salop, and Mr. W. E. Tidy, Havant, the best varieties in these being selected and enumerated in our report of the R.H.S. meeting.

Notes of the Week.

Elæagnus edulis has fruited freely this year in most places where it is grown. Some bushes in the Victoria Park at Bath, which were fruiting freely, have been cleared by the birds of the berries even before they were quite ripe.

Kœlreuteria paniculata is not usually a free-flowering tree in a young state, and we were agreeably surprised to see one in a villa garden on the outskirts of Bath. It was only about 8 feet high, but a pretty specimen, every branch crowned with an upright raceme of flowers.

Telekia speciosa is very striking now in the Victoria Park at Bath, a bold mass of it being isolated on the turf. It forms a dense and luxuriant mass of leaves, surmounted by a profusion of rich orange-yellow flowers, which make a fine display of colour and show well the fine effect that can be obtained from boldly massing the stronger hardy flowering plants.

Clerodendron trichotomum is represented by a handsome specimen in the Victoria Park at Bath, and, being quite isolated, has grown into a finely-proportioned bush nearly 6 feet high and as much through. In growth and outline it may be likened to a miniature Catalpa, but there is no resemblance as regards its flowers, which have been very profuse this season, and the bush was gay with them when we saw it.

Gentiana asclepiadea.—This is one of the latest flowering species, and a grand plant worthy of the best cultivation. It blooms through the latter half of summer and on into the autumn, quite half of the shoots, which grow 2 feet or more high, bearing flowers in clusters in the axils of the leaves. We noticed a fine, healthy mass of it flowering freely in the Victoria Park at Bath. G. lutea had also flowered well there.

Linaria alpina albo-rosea.—This is an exceedingly beautiful form of the old Linaria alpina which we saw several years ago flowering with Mr. Thompson at Ipswich, and a tuft of it is blooming freely in the rock garden in the Victoria Park at Bath. The flowers of the type are of a light purple colour, but those of this variety are of an exquisite shade of pink, with the two characteristic bosses of rich orange at the tip of the flower.

Hardiness of Incarvillea Delavayi.—To complete what has been said lately in The Garden about the hardiness of Incarvillea Delavayi, I may state that this beautiful plant withstood the cold of last winter under a simple covering of leaves both in my garden and in the garden of M. de Vilmorin at Verrières, near Paris. It has flowered abundantly this summer.—M. Micheli, *Geneva.*

Mutisia decurrens (referred to by Mr. Wood at p. 13, July 13) used to flower very finely in the open air in Messrs. Backhouse's nurseries at York, in a sheltered position facing south, on a bank forming part of the rockery, where it scrambled over some small conifers, the foliage of which served as a foil to throw out the rich-coloured flowers in strong relief, with very striking effect. —W. M.

Sea Hollies, though not often seen in public parks and gardens, are a pretty feature in the Victoria Park at Bath, and they attract much notice. E. amethystinum, in bold groups, was bright when we saw it, and E. giganteum, though it perishes after flowering, needs little care or culture here, seedlings springing up freely. Some of these self-sown plants, allowed to flower where they sprang up, were very fine alike in size and beautiful silvery colour.

Carnations from Edmonton.—Mr. H. B. May sends us flowers of some charming seedling self Carnations. W. Robinson is a fine scarlet self, a seedling from Winter Cheer, of the same sturdy habit and good form as that kind, and good in the open, from which the flowers sent were gathered. Leonidas is a very fine crimson Malmaison variety. Mrs. S. Seager, soft pink, and Henry Gibbons, in the way of Uriah Pike, but rather more scarlet and sweetly scented, are also good.

Spiræa Lindleyana.—This is a noble shrub for warm and favoured places, and we have lately seen it frequently about Bath and its suburbs, quite a tree in dimensions. When of this size it is one of the most beautiful flowering shrubs that grow in English gardens. It must be large to display its fullest beauty, and no praise can be too great for such specimens as are to be seen in Bath 12 feet to 15 feet in height, throwing out long arching wands terminated by creamy panicles of bloom, some of them nearly 2 feet in length.

Xanthoceras sorbifolia in fruit.—Several instances have been recorded this season of this shrub having flowered freely. A large and handsome bush of it quite 8 feet high, growing in the Victoria Park at Bath, has not only flowered well, but is now fruiting, this not being the first time it has done so. The fruits, borne in clusters of three or four and somewhat resembling those of Pyrus japonica, are of a light green colour, the seeds when ripe somewhat resembling Chestnuts. It is at all times, apart from its flowering and fruiting, a distinct, graceful and pretty-leaved shrub.

Apple Beauty of Bath.—The merits of this early Apple are not as yet sufficiently known, but it deserves wider popularity. In Messrs. Cooling's nursery at Bath we lately saw the original trees carrying heavy crops, and young trees were also bearing freely. Some of the fruits upon these last were sweet and juicy, and fast approaching ripeness at the time we saw them. The flesh is firm and the flavour brisk and delicious—altogether a most refreshing Apple to gather and eat from the tree in the heat of summer.

Pea Daisy.—This is undoubtedly an acquisition, and a Pea that will become popular amongst market growers as well as in private gardens. It possesses the qualities of the finest Marrow

varieties, is a profuse cropper, but its value to a great many lies in its sturdy growth. Although sticks would be used by those who have plenty of them, they can be dispensed with for this Pea with little or no disadvantage. We lately saw a large breadth of it in Messrs. Cooling's nursery at Bath. The haulm was unsupported, but the crop of large, well-filled pods was a very heavy one.

The flowers in Hyde Park.—We note with pleasure that there is much improvement here, mainly owing to the use of taller plants, which get rid of the flat, hard look of the older "bedding out." The Fuchsia is used gracefully, and charming it is to see here and there beds of good Stocks. Tall plants of Heliotrope and the blue Plumbago also help very well, and the Carnations and Cape Pelargoniums vary the garden, which looks fresh and charming. The main drawback is the old one of the beds being far too crowded and without relief. It would be a great gain if there was a little "air" about the spaces, which at present are too small, between the beds.

Campanula Vidali.—This has probably never been seen in finer condition than as shown at the Drill Hall on Tuesday by Mr. Poë, who seems to take a delight in the cultivation of uncommon and beautiful plants. Three very fine examples of this were shown, each having a number of flower-spikes. These were each over a yard in height, and the stronger ones had nearly thirty flowers upon them. Their effect was superb, and they attracted very much notice. When well grown, as the plants shown were, this is a really noble Bellflower. Its flowers are large, of a waxy white colour, distinctly shaped, being contracted in the centre, but widely expanded at the mouth, whilst at the base inside there is a zone of rich orange-yellow colour. No doubt many who saw these noble specimens will turn their attention to the plant, and it is clearly worthy of good culture.

Water Lilies at the Drill Hall.—It was a very great misfortune that at practically the first appearance of the new hardy Water Lilies at a London show they should be represented by such poor flowers. We fear that some visitors must have gone away disappointed, and have come hastily to the conclusion that these noble flowers have been over-praised, which is very far indeed from being the case. The flowers of N. Marliacea Chromatella were fairly good, but no one would give a moment's notice to the flower of N. odorata sulphurea as shown and barely 2 inches across. Yet we have had this self-same kind with immense starry flowers quite 8 inches in diameter. Again, M. Marliacea albida was shown with flowers not so large as those of our wild Water Lily. This, too, is of great size, breadth of petal and noble form. Even N. tuberosa, long grown in this country, was shown in the same small state, and N. Laydekeri rosea, small, pale, and quite unlike itself. It would have been far better had they not been shown at all.

Bocconia cordata.—The Plume Poppy is at present very striking. Growing at the back of herbaceous borders associated with clumps of Arundo conspicua and a handsome mass of Spiræa Lindleyana, its effect is very picturesque and distinct, the tall stems 8 feet high, with their great panicles of blossoms shaded from reddish brown, or what might be more aptly described as burnt almond colour, to creamy white, being unique both in tint and form, while the dark green of the upper surface of the lobed leaves contrasts well with the light shade of their woolly reverse. The plant is very accommodating in the matter of soil, the strongest-growing clump that I have met with being situated on a bank where the staple is light and shaly, and is persistently robbed of what good it might otherwise contain by the roots of Fir trees and shrubs, yet, notwithstanding this, the stems of this specimen exceed 9 feet in height. The Bocconia is worthy of a place in all gardens that can afford room for it. When once established it must, however, be kept within bounds, as it is a veritable land-grabber, and, if unrestricted, its suckers will encroach on the surrounding ground, greatly to the disadvantage of its neighbours.—S. W. F.

Lilium japonicum Colchesteri was well shown at the Drill Hall on Tuesday by Messrs. R. Wallace and Co., of Colchester, and worthily merited the first-class certificate it received, whilst the prominence now given to it will assist in clearing up the confusion that exists between it and L. Browni. Possibly they are both forms of one species, but L. japonicum Colchesteri is the true L. odorum; whereas L. Browni has frequently passed under this latter name. What we recently noted at Kew as being very fine L. odorum is really L. Browni. In leaf growth they are most distinct, the leaves of L. Browni being long, narrow, and tapering to a sharp point; whereas those of the other form are short, broad, rounded at the tip, and bluntly pointed. The flowers of L. Browni are of a more reddish brown tint externally than those of L. japonicum Colchesteri, in which the outside colouring is less extensive, of a darker chocolate hue; the opening flower is inclined to be of a pale yellow tint, but when fully expanded it is cream-white, and last, but not least, it is by far the more deliciously scented of the two. It is easy to have one substituted for the other, but when one has both, the distinctions do not need a critical eye to perceive them.

*** L. odorum being the older and authorised name, why add to the confusion by certificating it under the name of L. jap. Colchesteri?—Ed.

Some good new zonal Geraniums.—La Belle Alliance, sent out this summer by the well-known French nurseryman and hybridiser, M. Lemoine, of Nancy, is quite a new break and one of the most distinct and delicately beautiful varieties I have ever seen, quite unlike any other that has been distributed to the public. The flowers are of medium size and of good form, far superior to those of many sent out by foreign raisers, which are, as a rule, thin, poorly formed, and distinctly inferior in flatness and roundness of petal to the fine varieties raised and sent out by our principal English growers. The ground colour of the new French variety above-named is of the most delicate shade of pale blush, and the three lower petals are thickly, and the two upper more sparingly, marked with clearly defined crimson spots, which impart a novel and quite unique appearance to the flower. This variety has also the additional merit of being proliferous, as, when the flowers on the ordinary truss fade and fall away, no less than five subsidiary or proliferous trusslets appear, each of them bearing from four to twelve equally perfect and pretty flowers. Altogether this new variety is a very charming acquisition to our greenhouses. Three new pure white varieties may also be mentioned; they are named Albion, Doctor Nancen, and Snowdrop. The flowers of these are all of fine form and substance, and absolutely pure, leaving it hard to understand how anything better can be obtained. Two new varieties have been added to the pretty French bicolors, Lady Newton and Exposition Universelle de Lyon, but neither is so fine as Mme. Jules Chrétien.—W. E. Gumbleton.

Notes from Chester.—We send you sprays of some of the flowering shrubs that are just now in their best condition. Rubus odoratus has very bold and striking foliage; its masses of leafage make it a splendid subject for the foreground. Its large pink flowers are freely borne, and, extending over a lengthened period, they give a fresh front to the bank of boldly outlined leafage which supports it. The Ash-like branches of Maackia amurensis when seen in growth with the waxy flowers carried in compact panicles are very effective. The Desmodium penduliflorum has the look of a hybrid product between Sage and Lupine, and cut singly like the spikes sent on to you, is not nearly so striking as it is growing naturally in the open. Its colour is attractive and it shows out boldly and well. The Sumachs are perhaps plants most generally connected with autumn glory when the foliage is brilliant, but we send you one of the flowering tips of Rhus glabra with its dense cone of blossom, and it is, as you will see, a prominent feature in the garden landscape even now. The St. John's Worts are always beautiful, and the specimen of Hypericum androsæmum sent to-day is just as pretty as any of them. The berry-bearing plants are associated more or less with the wane of the year, though this is not a strictly accurate association. There is plenty of berried plants about now, though we are only just past midsummer. A beautiful little coral-covered plant just now is the Crowberry (Vaccinium Vitis Idæa). We send a few sprays of this dainty evergreen plant. Phloxes are gay in the wider borders filled with showy popular favourites, and the Begonias have already put a glowing beauty into the flower gardens, which is even brighter than Geranium effects.—Dicksons.

Two interesting works came under the hammer at Messrs. Sotheby's sale room, Wellington Street, Strand, a few days ago. The first was a fine copy of Smith and Sowerby's "English Botany," with the supplement, making together 39 volumes, in tree marbled calf, the original first edition, coloured by hand. This choice set brought £22. The second was a subscriber's copy, in the original binding as issued, of Hooker's "Flora Londinensis," five volumes, folio, which realised £13 10s. This copy was specially coloured by Curtis for his friend Dr. Dickinson, of Liverpool.

The weather in West Herts.—The weather has been cooler than of late during the daytime, but, on the other hand, somewhat warmer at night. Since the beginning of the week the temperature of the ground at 2 feet deep has fallen 1°, and at 1 foot deep 4°. On the night of the 17th inst. the long drought came to an end. This drought had lasted nearly twelve weeks, during which period rain fell on only sixteen out of the eighty-one days, mostly in light showers, and to the aggregate depth of less than 1½ inches, or nearly 5 inches less than what may be regarded as a seasonable amount for the same three months. By way of contrast it may be mentioned that during the last six days 3¼ inches of rain have fallen, which is more than twice the quantity deposited during the previous twelve weeks, and nearly an inch in excess of the mean for the whole of July. Of this total rather more than 2 inches, equivalent to about ten gallons of water through every square yard of surface in my garden, has already come through the heavy soil percolation gauge, the equivalent for the one containing light soil being 8½ gallons. In any ordinary rains with the soil so dry a month or more would have elapsed before any water at all passed through either of these gauges. But the rainfall on the 17th was so remarkably heavy, that, except where the ground had become hard on the surface, it penetrated to an unusual depth. A week ago my lawns were the colour of the gravel paths, but they are now quite green. Indeed throughout the whole garden the growth made by everything since the rain, considering the shortness of the time, has been truly marvellous.—E. M., *Berkhamsted.*

Death of Mr. T. H. Rabone.—It is with much regret that we have to announce the death on Saturday last, at the age of 62, of Mr. T. H. Rabone, for the last 26 years head gardener and steward to the Earl of Shrewsbury and Talbot, Alton Towers, Staffordshire.

Names of plants.—*Anon.*—3, Sedum album; 4, Sedum Aizoon.——*S., Dublin.*—2, Apple-scented Salvia; 4, Justicia carnea; 5, Pyrus japonica, fruit not edible; 1 and 3 next week.——*C. F. Langdon.*—1, Telekia speciosa; 2, Centaurea macrocephala; 3, send better specimen.——*B. Smith.*—Pyrus salicifolia.——*F. Ashman.*—Rhus Cotinus.——*Collins Bros.*—Veronica longifolia var. rosea.——*Constant Reader.*—1, Rubus odoratus; 2, Linaria repens alba; 3, Sedum dasyphyllum; 4, Heliopsis var.——*E. F. Clark.*—1 and 2, forms of Sedum rupestre; 3, Sempervivum Haworthi; 4, Sedum rupestre; 5, Polygala Dalmaisiana; 6, Impatiens Noli-me-tangere.

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"This is an Art
Which does mend Nature; change it rather; but
THE ART ITSELF IS NATURE."—*Shakespeare.*

FLOWER GARDEN.

NOTES FROM THE UPPER ENGADINE.

JULY is the time of Roses, and even in these high altitudes Nature does not disappoint us. Here at 6000 feet above the sea, and up to the snow line, she clothes the hills with a profusion of rosy blossoms. Although not the Roses which are now adorning English gardens, and in no way actually resembling them, the Rhododendrons of the Alps, or alpine Roses, are a fair substitute, if only the beauty of colour and general effect are considered. Fragrance they lack, but they are in perfect harmony with the wild scenery that surrounds them. Here Rhododendron ferrugineum is in perfection, the low-growing bushes being so thickly covered with flower that the effect in the distance is somewhat the same as of Heather in bloom on a Scotch hill; but on a nearer inspection numbers of flowers, which would be welcome in any English rock garden, are found half concealed among the pink branches. Conspicuous among the taller varieties are the golden stars of the Arnica and pale blue spikes of the Campanula barbata. The flowers of the Upper Engadine are too well known to require much comment. Every visitor to this favoured valley is struck by their beauty, and those who are lovers of rock gardens cannot fail to find ample scope for study on every hillside. The arrangement of each group of stones seems so perfect, that no garden rockery could be so artistically grouped, or each little crevice so successfully filled with such appropriate plants.

In a walk or climb of any distance the number of species that can be found is immense. Every few hundred feet one ascends, fresh treasures become apparent; those that were common below are left behind, and the flowers which were in full bloom at 6000 feet are just coming into bud 1000 feet higher. Just now the pastures in the valley are bright with the small light blue annual Snow Gentian (G. nivalis), while the larger and deeper coloured G. acaulis and excisa and brachyphylla and bavarica are only found at a still higher level. In the meadows in the valley one finds quantities of the sweetly scented little Orchid, the alpine Nigritella, and growing near it the common Burnet, which so much resembles it in colour. There are also thousands of spikes of the common Polygonum bistorta and a great quantity of the orange Hawkweed, alpine Trifolium, and the Mountain Avens (Geum montanum), whose soft fluffy pinkish heads of seed are now more conspicuous than the yellow flowers. Among the taller field flowers now coming into bloom we find the two handsome yellow Gentians (G. lutea and punctata), the poisonous dark blue Monkshood, the paler alpine Columbine, and here and there towering above all the showy blue alpine Sow Thistle. Among the rocks we find great patches of the little blue Campanula, and a perfect network of the Sempervivum arachnoideum and two larger varieties, all with equally brilliant red star-like blossoms, while every crevice and cranny are filled with some fascinating variety of Saxifrage (aspera, Aizoon, muscoides, rotundifolia, and many others).

A few hours' stroll up the mountain side will soon take one into another world of flowers. The upland meads are still studded with Primulas in bloom (farinosa, longiflora, viscosa, and the low growing integrifolia) and quantities of the purple long-spurred Violet, while the spaces under the rocks, which here and there crop up, are filled with the yellow Viola biflora and purple and white Butterworts. The grassy slopes are bright with the alpine Aster, and at still higher altitudes with the alpine and the sulphur Anemone. At this elevation, about 7500 feet, the rocks are covered with soft cushions of pink, and more rarely white, Androsace, their tiny flowers frequently so close together as completely to cover the green Moss-like leaves. In some places, as on the top of the Bernina Pass, the Androsaces are rivalled, if not surpassed, in brilliancy by the trailing Azalea (A. procumbens), which grows close to the ground and forms a carpet of coral-pink. In the same localities we also find the white Dryas, the sweet-scented pink Daphne, the blue dwarf Scorpion Grass (Eritrichium nanum), the purple alpine Toadflax (Linaria alpina), and the dainty little Bell-like flowers of the Soldanella. Higher up still, right into the snow, grows one of the prettiest of alpine flowers, the Ranunculus glacialis. This delicate-looking little flower, with white petals shading to red and red hairy calyx, grows at a greater height than any other flowering plant in Switzerland, having been found but a short distance from the top of the Finsteraarhorn.

One plant always associated in people's minds with the Alps, the Edelweiss, also grows freely in this neighbourhood. Children pick great bunches of it on the rocky slopes of the mountains between here and the Fornio glacier, and these flowers can be bought for a few pence, but the plant is protected by law and the ruthless digging up of roots by the peasants is forbidden. But the searcher for this "luck flower" need not climb to giddy heights to procure it, as in some valleys it grows within a short distance of a good carriage road, and I have been fortunate in finding it on the rocks by the shores of the lake of Sils.

In this short space it is impossible to mention one-tenth part of the flowers which Nature has scattered here with such a lavish hand. Every roadside, meadow or Pine wood, every mountain path, craggy height or wild moraine offer a world of study for the botanist, a practical lesson for the gardener, and an endless source of delight to the amateur.

Maloja. A. M. T. A.

FLOWER GARDEN NOTES.

HERBACEOUS LOBELIAS.—I was responsible for the recommendation to leave herbaceous Lobelias in the ground (see page 455), and am glad that "S. W. F." has found no ill-effects from such treatment. It is, however, strange that on a cold heavy soil no surface protection is necessary, whereas in light dry ground I find it decidedly advisable. The inference must be drawn that these inmates of the flower garden are somewhat erratic in habit, and that it is difficult to know what to do for the best so far as their winter treatment is concerned, unless, as "S. W. F." suggests, half a dozen different methods are tried. If I remember rightly, one correspondent, who found annual lifting absolutely necessary, wrote from a soil very similar to that described by "S. W. F." Where these Lobelias are planted on a carpet of white Violas, it is advisable to keep the latter very hard picked, so that plenty of flower is showing when the spikes of the Lobelias are well developed. Possibly, as elsewhere suggested, a carpet of, say, Mesembryanthemum or silvery Veronicas is more suitable for them. In common with all herbaceous plants they have welcomed the splendid rains of July 20 and 21; prior to this the foliage was very limp and with little of the bright colour that is so attractive.

SURFACE MULCHING.—Writing of surface mulching in connection with the Lobelias reminds me to note that it plays a most important part in the cultivation of herbaceous plants, both as a protective agent in winter and a great incentive to growth, and the longer preservation of flower through the summer months. I refer to the matter at this season because there are instances to hand of the neglect of the winter mulching in the weak growth in the clumps of outdoor (I was about to write hardy) Fuchsias, and in the collapse of the old stock of Antirrhinums and summer flowering Chrysanthemums. Several gardeners have had to deplore the loss of Gypsophila paniculata, and concerning this and other things I heard the other day a very sensible remark, "Let us not depend too much on the hardiness of those things that cannot be guaranteed as perfectly hardy, but practise winter mulching by all means if there is the least suspicion of the inability to come safely through a very sharp winter." It may be added, after the experience of last year, that a heavy mulching is desirable. I have to acknowledge an error in writing two years ago of the non-hardiness of Galtonia candicans. The failure to appear in 1893 must have been due to a disturbance of the bulbs and not to severe frost, for the plants came up strong and well this year, and that despite the fact that in February, 1895, the frost penetrated the ground to a depth of 18 inches.

HARDY PLANTS FOR POTS.—I should like to draw attention to the use that can be made of hardy plants for pot culture at this particular season, whether they may be required for home vases or grouping, or to add to the attractions of the show tent. Their value in this direction is as yet imperfectly known, especially in those places where the amount of glass is insufficient to meet the demand with more tender plants. In giving the names of some particular things that will be found very useful and recommending this mode of culture, it may be noted that they should in the majority of cases be potted in early autumn, choosing for each the soil found most suitable for outdoor culture, plunging the pots to their rims in coal-ashes, and avoiding anything in the shape of coddling. Sound little plants, clumps, layers or corms must in all cases be chosen. In naming half-a-dozen really good things I should choose Montbretia crocosmiæflora or Pottsi, Gypsophila paniculata, Hydrangea paniculata, Carnations Ketton Rose and White Clove, and Campanula persicifolia fl.-pl. If to these are added a few pots of the Cape Hyacinth, a group can be made that would be hard to beat even with choice inmates of the stove, especially if, in addition, a dozen of such half-hardy things as Francoa ramosa and the old, but exceptionally useful, Fuchsias as Mme. Cornelissen, Abundance and Mrs. Marshall

are grown. As noted above, good sound corms of the Montbretia must be selected for potting, and in the case of the hardy herbaceous plants nice little clumps selected that are showing vigorous breaks. Border Carnations required for pot work I like to layer early, choosing the most vigorous grass. Extra care must be taken in the operation, not only to see that the knife is carefully used, but in the proper placing of the soil and in due attention to watering. The lifting for potting must also be carefully performed, getting well round and under the plants to prevent any injury to the roots. I think one of the most charming groups (on a small scale) I ever had was composed of a nice lot of the Gypsophila, associated with good plants of Carnation Ketton Rose and a Clove seedling something in the way of Raby, but much deeper in colour, more serrated and a non-splitter.

Claremont. E. Burrell.

PROPAGATING TUFTED PANSIES.

Wherever a very early spring display of bloom is essential, it is important that a start be now made with the cuttings, for there is no season in the whole year so suitable for this purpose as the month of July. Where plants of the proper stamp exist there will certainly be no scarcity of cuttings of the right sort. There are cuttings and cuttings, and I have upon more than one occasion seen gardeners inserting cuttings which were not of the right stamp, and which could scarcely be expected to produce good results. No one need ever hope for anything like a full measure of success who attempts to utilise the flowering growths of the current season for propagating. Plants raised from such cuttings as these, moreover, invariably produce only a sparse supply of cuttings next year. Next to this is propagating by division; indeed, I am strongly of opinion that a great many of the losses of which we hear from time to time are the direct outcome of divided plants. I was once led to divide my plants, and the following year was the most disastrous I ever had. Plant after plant collapsed quite suddenly and in a manner which surprised me, though my treatment was in every other respect similar to that I had adopted for years with every success. And then again, when I came to look for my usual supply of cuttings for the next year they were scarce indeed; in short, these divided plants seemed to be in a great measure bereft of the little remaining vitality during the summer flowering of the plants. Of some kinds I had happily a reserve batch from cuttings, which not only furnished me with the latter of the right quality, but also furnished an object lesson for the future. I think it is fairly obvious at a glance that a plant freshly rooted annually should be possessed of a greater natural vigour than one divided from a plant already much exhausted by the fresh demands made upon it during its flowering. If those interested in this particular style of gardening desire, they will quickly see a marked difference between the mass of roots produced upon a single plant from a cutting, to say nothing of the general vigour, and the sparse and feeble rooting that characterises a divided plant. The cutting is, in fact, an individuality of its own, representing an absolute renewal of vigour which cannot be secured by division.

It is very true that these tufted Pansies in many instances lend themselves to division, but it by no means follows that we obtain the greatest measure of success by its adoption. At page 35 of The Garden I notice Mr. Burrell refers to a probable scarceness of cuttings, and it would be interesting to know whether the plants on which this is so noticeable are from cuttings or division. Of course, we have experienced a long season of drought, which has retarded growth of all descriptions, but, apart from this, the plants, if from cuttings, should have their centres teeming with fresh young points. Every one of these points will root with the greatest ease, and drawing out the largest first and inserting them will give the remaining growths an opportunity of gaining strength. In a week hence the plants should be gone over again, and in this way it is quite easy to get fully 100 such growths from a single plant. Indeed, if circumstances demanded it, even more than this could be obtained. Mr. Burrell in the same note further observes, in reference to dividing the plants, that "This latter style of propagation will have to be more generally adopted than is usually the case, at any rate on all light soils." In reply I can only sincerely hope such will not be the case, as there is really no necessity for division—at least, for the majority and where a working stock exists. In this district (Hampton) the soil is exceedingly dry in such summers as the present one—in fact, dust-dry to a depth of 15 inches or 18 inches. Here I have raised many thousands with the greatest ease, and with very few losses indeed.

Where large numbers of these tufted Pansies are required it is far the best plan to plant a reserve patch for the purpose of propagation By adopting this method the arrangement in the beds or borders need not be interfered with. When planting a reserve batch for stock I usually do so in nursery beds of about 5 feet wide. The soil must be previously well prepared by deep digging and burying abundance of cow manure fresh from the sheds. This item may be contrary to the generally accepted notion, but I attribute a great deal of my success with these plants in the exceptionally dry soil of this district to the free use of fresh cow manure. Not only does this enrich the soil, but it also provides that uniformly cool, moist rooting medium which is the greatest essential to success in very hot summers. Once the roots obtain possession of this layer of cow manure I regard them as almost proof against a summer like the present one has been. Plant in deeply drawn drills or shallow trenches, which permits of a slight earthing up. Planting is done the first week in October, and as the young shoots appear the earth is closed round them. In this way by the end of the year the July cuttings will have from a dozen to a score of shoots issuing from the base. But by earthing up, all these were protected from the winter then close at hand. From this time beyond keeping free of weeds little was done to the plants till the end of June. At this time they were cut down to within about 2 inches of the earth. Then followed a good hoeing and soaking of water if the weather was dry. At the time of cutting down, the centre of the tuft was generally full of young points, and these in a fortnight or three weeks make splendid cuttings. The kind of frame I used for some dozen years or more was generally a home-made one, 9-inch boards forming the sides and ends; a depth of 4 inches or 6 inches of soil was then prepared for the cuttings, the latter being simply drawn from the centre of the old plant, and, coming away for the most part with a heel attached, were inserted in the frame just noted without more ado. I always prefer cuttings with a heel, as I find these produce growth buds much more freely from the base than do cuttings made to a joint with the aid of a knife. Selecting only the strongest first, the whole collection is thus gone through again in about a week or ten days' time and until a sufficient number has been secured. The adoption of this method means an immense saving in labour alone, for where thousands are required it is a long and tedious business to make these with a knife. Always insert quite firmly, water thoroughly, and shade lightly. In a month from inserting, these will be ready for transplanting to nursery beds preparatory to going into their permanent quarters, and where the work is done promptly the resulting plants will be a source of pleasure and surprise. Occasionally when pressure of other work has prevented the above work being done at the moment, I have, after cutting over the plants, filled up the centres lightly with finely sifted soil, extending the same over a 6-inch radius. By keeping this soil daily watered the fresh young growths quickly root into it. At the end of three or four weeks lift the entire plant and strip these young pieces off singly, transplanting into nursery beds or lines. In doing this I always discard any old wood or roots that may chance to come away with the young growth, believing that greater progress and vigour are secured by the building up of an entirely new plant annually. It sometimes happens that this earthing up of the tufts causes the young growths to elongate somewhat, and to counteract this it will be found a good plan to pinch out the point of each having this tendency. E. Jenkins.

Begonia Worthiana in the flower garden.—"G. W." (p. 38) considers the above the best of the small-flowered section, but has he tried Lælia, Acme, Madame Lamarche, Paul Masurel, Message de Louvre, Charles Raes, &c.? These nearly all made their appearance about the same time as Worthiana. All have medium sized flowers, but are far more showy than Worthiana. We have beds of all the above kinds by the side of Worthiana. Lælia makes a fine bed, the flowers of nearly the same colour as those of Henri Jacoby Pelargonium. The rage for size in the tuberous Begonia has nearly obliterated these smaller flowered sorts, but for effect the large-flowered kinds are nowhere beside their smaller flowered companions; even the old Sedeni makes a pretty bed. I suppose that the above kinds are now out of the trade, as I am being constantly asked where they can be had. These bedding Begonias should not be placed in pots at any time, and are far more satisfactory if they are never given glass protection.—Fredk. Bedford, *Straffan House.*

Funkia Sieboldi.—This handsome Plantain Lily is a valuable plant for effect and the most indispensable of the species. From the time it pushes up its strong cordate leaves until they drop at the approach of winter, it is always ornamental. The glaucous blue-green of the foliage is restful to the eye during the arid days of summer, while in the autumn the leaves assume a clear yellow tint that is almost equally charming. The flower-spikes, though pretty, are not particularly striking, being tall racemes of whitish lilac blooms that, however, harmonise delicately with the colour of the foliage. There are few places in the garden where F. Sieboldi would be out of place, but perhaps the sub-tropical portion or open spaces in the wild garden would be best suited to the display of its noble beauty. I have a fine clump, over 3 feet in diameter, growing in a shady position. This has produced over thirty flower-spikes this summer, and has been greatly admired. Snails are very fond of the succulent leaves, and must be rigorously exterminated from the neighbourhood of the plant if it is to attain its greatest perfection.—S. W. F., *Torquay.*

Sweet Peas.—When any popular flower becomes rapidly improved and increased there is always danger that such exceeding development will soon destroy popularity. Already we hear of demands that such popular flowers as Begonias, Gloxinias, and similar things should be simply regarded as seed strains, and certificated accordingly. Sweet Peas have got into the same category. Mr. Eckford, the great raiser, lists some fifty-five, and there are many others, old and new,

not included. As a result there is now, if variety, yet great sameness. But the worst feature is found in the many, not merely bicolors, but ineffective, indeed, unpleasing varieties with colours or combinations that are positively objectionable when viewed side by side with the best and most pleasing forms. It is a pity that, for the sake of making trade, so many of what seem to me and others to be so worthless, should have names and be put into commerce. They are bought and grown, they disappoint, and thus do Sweet Peas harm. Mr. Eckford had a very large collection at the Drill Hall on the 23rd ult., when a dozen of the prettiest are taken out—what was left might be discarded. What a pity it is that one half of the entire lot cannot be rejected altogether, and only the best grown and put into commerce. A dozen of the very best—as selected from the collection—are Blanche Burpee, white; Prima Donna, flesh; Royal Robe, pink; Meteor, bright carmine; Lady Penzance, reddish rose; Ovid, deep rose; Firefly, rich scarlet; Cardinal, crimson-scarlet; thus giving a very gradual deepening of colour, with a very dark one in Henley, maroon; then of blue tints, there are Lady Grisel Hamilton, pale mauve; Countess of Radnor, pale blue; and best of all, Emily Eckford, rich blue. —A. D.

NOTES FROM MOUNT USHER, CO. WICKLOW.

This river-side garden is becoming richer and more popular every year. Its owners evidently do not rest, but by well-directed exertions in the intervals of a busy life are continually carrying out the deep and subtle laws of evolution. A garden, like every other natural growth, is either advancing or receding; there is no such thing as standing still. It is this constant progress, perhaps, that makes Mount Usher always new and always refreshing. Just now there is Rosa Brunonis tumbling like a silvery cascade over the dark roof of a creeper-clad outbuilding. Marliac's Nymphæas (white, sulphur, and rosy red) are garnishing the pools, fringed with elegant Bamboos; and there, on the margin of the Water Lily pool in the wood, is Meconopsis Wallichi, of a blue soft and satisfying colour as the sky itself, each flower springing from a main stem over 6 feet in height. Nowhere else have I ever seen this exquisite blue Poppy finer or healthier than here just now. Another plant that is very beautiful is Sparaxis pendula, its 6-feet to 7-feet wands waving in every breeze, its slender stems arching as gracefully as any Bamboo, and its pale peach-tinted blossoms swinging bell-like from stems like the finest of wire. This is a hardy Cape bulb, seldom seen in all its beauty, but here it is now one of the most remarkable objects in a good garden. The new rock garden or stepping-stone bed is full of rarities, not the least being Campanula Zoysi and the dark purple Cyananthus lobatus, and here luxuriant masses and tufts of the Gentianella fringe every stone. But the glory of the "stepping-stones" just now is Dianthus Napoleon III. (a dozen large masses or more), not the usual worn-out unhappy bits, but great sheaves of dark green foliage having dense crimson heads of flowers. No description could do justice to this plant as thus seen luxuriant and happy. Its colour is most intense, a rich crimson-scarlet, before, or rather beside, which the scarlet of Tropæolum majus on an adjacent paling of Ivy looks thin and poor in tone. There are Roses everywhere—China, Tea, and Hybrid Perpetuals. The great Apple Rose of Parkinson is most luxuriant, 10 feet or 12 feet high or more, its large and soft leaves Sweet Brier scented, and every shoot gracefully laden with its great hairy fruits, nearly as large as, but quite different in shape from, those of the Ramanas Rose of Japan. Here I may allude to the above two Roses, and with them will join R. acicularis, which I lately saw at Newry, as being perhaps the finest three of all fruiting Roses; at any rate, if there are larger fruited and more fertile Roses or any even equal to the three above-named, I shall be very glad to hear of them.

Mount Usher lies in a deep and sheltered "happy valley" in Co. Wicklow, which is itself (like Kent in England) a focus spot of scenic beauty and gardening potentialities so far as soil and climate are concerned. Not only are horticultural rarities grown at Mount Usher, but even the most luxuriant of garden weeds are artistically utilised in suitable positions. The great Hemlock of Siberia (Heracleum giganteum), Inula Helenium, Telekia speciosa, &c., are made welcome in the wood garden, and the iron palisade fence, a most objectionable eyesore in most gardens, is here in part concealed by luxuriant Bindweeds, such as the great white Calystegia sylvatica from Hungary and the pink variety from North America or Japan. If I were to attempt the due relation of half the interesting plants now flowering at Mount Usher I should fail, but those who have enjoyed the privilege of seeing the place in its summer or autumnal beauty of tree and Fern or flower will agree with me that, like Killarney and other historical spots, this sweet little river garden at Ashford is really an Eden of the west.

F. W. B.

Notes of the Week.

Astilbe chinensis is an uncommon hardy herbaceous Spiræa that has been flowering for a long time in Mr. Perry's nursery at Winchmore Hill. It is a graceful and very pretty kind, with plumy spikes of rosy pink and white flowers on stems about 18 inches in height.

Milla biflora succeeds well at Kew planted out in a frame devoted to bulbs of a similar half-hardy nature. It ought to be a popular garden bulb, its large long-stalked flowers being of the purest white and very beautiful, especially as seen growing among the narrow Rush-like leaves.

Œnothera marginata.—This lovely Evening Primrose has been exceedingly beautiful during the early summer, its great white chalices scenting the evening air with delicious fragrance. It is certainly the gem of the family, and being a perennial should be in every garden.—S. W. F., *Torquay.*

Rosa pyrenaica.—Among wild Roses that are distinct in fruit this species merits notice. Some little bushes of it in the rock garden at Warley Place were laden with heps, which are 1 inch or more in length, of a bright red colour and clothed with hairs.

Ipomæa Leari.—This beautiful Indian species is now almost forgotten and rarely seen in gardens, but at Warley Place it still finds a home, and is conspicuous in a house of many fine stove climbers, giving a long succession of its bright blue flowers throughout the summer months.

Asparagus decumbens.—Among plants suitable for hanging baskets to adorn conservatories there are few more beautiful than this. A magnificent basket of it hangs in the conservatory at Warley Place, the long light shoots, from 3 feet to 5 feet in length, forming a graceful picture of elegant growth.

Crinum Schimperi, an Abyssinian species flowering at Kew, is very distinct. Its leaves are of a decided glaucous tint on their upper surface, the flowers white, faintly tinged with blush externally. The petals are broad, bluntly pointed, narrowing considerably at the base, and the tips reflex greatly after the flowers have been cut a few days. A strong scape was bearing six fine flowers.

Lily show at Manchester.—It will be seen from our advertisement columns that the great Lily show, which was announced to open on the 5th inst., is postponed till the 22nd. Special facilities are offered to gardeners who may feel disposed to visit this the first special exhibition of Lilies held in the country. There will also be a special exhibition of Grapes.

Spineless Gooseberries.—Messrs. Letellier et fils, of Caen, Calvados, send us some specimens of their spineless Gooseberry. It is a good and well-sized fruit, of fair flavour. We hope they will go on adding to these varieties, not striving after large fruit, but trying to get the delicious quality of some of the best Scotch dessert kinds.

Pinguicula caudata.—Mr. Greenwood Pim kindly sends us photographs of a very well-grown plant of the great Mexican Butterwort (Pinguicula caudata), bearing in all nine flowers and buds. We are always glad to see clear and simple photographs of good garden plants, but these pictures of Mr. Pim's are not quite up to his usual standard of excellence, and could not be well engraved.

Koelreuteria paniculata.—Here this shrub is flowering this year for the first time in sixteen years. Apart from its raceme of flowers the foliage is handsome all through the season, but in the autumn it is especially so when covered with the pleasing autumn tints. The plant here is also about 8 feet high.—E. M., *Swanmore Park, Bishop's Waltham.*

Gaura Lindheimeri.—This herbaceous plant is too seldom met with in gardens. It is now in bloom, its tall spikes of white and claret flowers being very effective. It is a perennial that is grown and increased as easily as are herbaceous Phloxes. It seems perfectly hardy, and soon forms large clumps, the flower-spikes rising to a height of over 3 feet.—S. W. F., *Torquay.*

Clematis Viticella.—Two fine varieties of the old Virgin's Bower Clematis flowering in the Chiswick collection are C. V. rubra grandiflora and C. V. kermesina. Both of them have flowers of a rich and most distinct shade of velvety crimson borne as profusely as upon the typical plant. The flowers of the former variety, however, are noticeable for their fine size and breadth of petal.

Weigela Abel Carriere.—This variety has been much praised, but certainly not in excess of its merits, for while it stands out conspicuously as one of the finest when all the varieties are in bloom, it has the merit of keeping up a succession. A bed near the Fern houses at Kew is filled with this kind, and the plants are again breaking out into profuse bloom at a time when flowering shrubs are mostly past.

Meconopsis Wallichiana is usually well grown in the rock garden at Kew, but last winter severely thinned the group of plants, only leaving two, which are now flowering, but decidedly of different tints. The finest plant has flowers of a pale mauve shade, but those of the other one are of the characteristic shade of clear pale blue. This fine Indian Poppy is worthy of the care it needs.

Gentiana septemfida, one of the best Gentians for the rock garden, is now blooming well at Kew. Its rich deep blue flowers, as effective as those of the Gentianella in spring, are borne in a crowded head or cluster at the top of a slender leafy stem about one foot in height. The flowers being too heavy for the stem to support erect, it is well to let the plants be near a rock, over which they can droop.

Crinum Powelli album.—The past severe winters have tried and proved the absolute hardiness of C. Powelli, and doubtless the same degree of hardiness characterises its white counterpart, which is flowering grandly at Kew in an open border against one of the houses. A splendid scape had five immense pure white flowers expanded at one time, with a number of buds to follow in succession. It is a worthy companion to

the pink-flowered type, and those who have the one should not long be without the other.

Mazus Pumilio, a charming little New Zealand plant, thrives well in the rock garden at Warley Place, and is now flowering freely. It forms a spreading carpet that hides the ground upon which the leaves lie almost flat, and it is fortunate that they do so, otherwise they would quite hide the tiny, but pretty flowers, which are of a pale violet colour, and borne singly on stems each little more than 1 inch in height.

Lilium Krameri grows and flowers remarkably well in the rock garden at Warley Place, several groups of it being a prominent feature at the present time. It is satisfactory to note a gain in strength and in the number of flowers on each stem from the bulbs longest established. One group has now been four years in its present situation, and the strongest shoots are carrying four flowers, whilst one has borne five.

Campanula glomerata alba.—A pure white form of the familiar and showy clustered Harebell should become as popular a garden plant as the type itself, and we were pleased to see a quantity of it in Mr. Perry's nursery at Winchmore Hill. There was still a lot of flowers upon the plants even at this late season, as this variety, besides its distinctness of colour, sends up a succession of its pretty clustered spikes of bloom.

Fruit of Prunus Pissardi.—I have not noticed any mention of the good qualities of the fruit of the purple Cherry Plum (Prunus Pissardi). We have had several tarts made of it; these were excellent. The fruit is much liked by birds, so cannot be allowed to ripen on the trees, otherwise its warm brown colour and pleasant, though not decided, flavour would make it a desirable dessert dish.—George F. Wilson.

Prunella Webbiana is a distinct addition, and Mr. Perry, who has it flowering well at Winchmore Hill, thinks it a first-class rock plant. It will make a charming companion to P. grandiflora, which we recently noted as being fine at Kew. Its flowers are much larger than those of P. grandiflora and in striking contrast as regards colour. They are of a deep violet-blue shade and borne in crowded heads on short erect stems.

Hunnemannia fumariæfolia.—This beautiful Mexican Poppy, favoured by the hot season, is flowering well in the rock garden at Kew, and the little colony of it attracts notice both by the light and graceful glaucous leafage and the rich yellow flowers, with their cushion of bright orange-red stamens. It must be treated as an annual or biennial in an open, sunny place to ensure its doing well. A coloured plate of it was given in The Garden of June 11, 1887.

Carnations Raby and the Old Clove make a gay bed at Kew, where we are pleased to see that much more attention is being given to these flowers. Whilst many new Carnations seem to last but a few years, the good old Raby is as vigorous as ever and looks very bright, filling the centre of a long bed, broadly edged on either side with the Old Clove, which seems healthier in London and its vicinity than in many country gardens.

Agapanthus Mooreanus.—Some fine spikes of this pretty Agapanthus were shown at the last meeting at the Drill Hall by Mr. F. W. Moore, Glasnevin, and it is also flowering well at Kew in a frame beside the economic house where there is a strong plant planted out. It appears to flower quite as freely as A. umbellatus, the plant having eight fine spikes a yard or more in height and crowned with fine heads of bloom.

Humea elegans.—There are some very fine specimens of this graceful plant now flowering in the temperate house at Kew, where being planted out and with abundance of room overhead they have attained to dimensions such as we rarely see. One of the finest is nearly 15 feet in height, the upper 6 feet an exceedingly beautiful drooping pyramid of bloom, whilst many side branches are also terminated by long sprays of flowers.

The Swan River Daisy (Brachycome iberidifolia) is a graceful and lovely annual rarely seen in gardens, but delightful, as we have seen it at Kew on several occasions lately in spreading masses of a yard or more across. It grows less than a foot in height, but completely hides the ground with a sheet of bright blue Daisy-like flowers, which are extremely pretty when seen near at hand and distinctly effective in the distance.

The Agapanthus in its blue and white forms is now a pretty feature in the Chiswick Gardens where it is planted out for the summer months, the plants filling a raised bed near the rock garden. They are carrying fine heads of bloom, and the white form is quite as fine as the typical blue. This way of using the old African Lily might be extended in gardens, as the plants need much less attention during the busy summer months.

Venidium calendulaceum may be grown as a half-hardy annual, or propagated by cuttings in autumn, but in any case it is a brilliant summer flower. It is evidently a favourite plant at Warley Place, as we saw several masses of it, and the effect was superb, with hundreds of single orange-yellow, Marigold-like blossoms fully out in the bright sun. It not only flowers profusely, but lasts long, spreading over the ground and blooming as it grows.

Pratia angulata is an alpine gem that flowers from the summer onwards, but is so diminutive that it has little chance of growing if in proximity to taller plants. In the rock garden at Warley Place these little plants have a suitable nook to themselves, and this one is very pretty, a mantle of rich green spreading over the ground and acting as a foil to its pure white blossoms, which, though small individually, are very effective in the mass.

Tufted Pansies.—There is plenty of evidence at Kew that tufted Pansies can be well grown even during hot seasons and on light soils if the cultural details are adapted to the needs of the plants. Four beds near No. 4 house were pretty some weeks ago with a combination of English Irises and Pansies, but they are even prettier now since the Irises have gone to rest. The Pansies cover the beds and present to view a perfect sheet of fresh, sweet flowers. The varieties are Countess of Hopetoun, Skylark, Archie Grant and Formosa.

Symphyandra Kaufmanni is a pretty biennial Bellflower that Mr. Perry grows well, and we saw a good batch of it, some of the plants being in bloom, others making strong rosettes of leaves and gathering strength for next year's flowering. In habit of growth and blooming it much resembles a Canterbury Bell. The flowers are ivory-white, large and bell-shaped, less expanded at the mouth than those of Campanulas, but disposed in a graceful branched pyramid about 1 foot high. It is quite hardy at Winchmore Hill.

A noble specimen plant.—At the recent flower show held in connection with the meeting of the Northamptonshire Agricultural Society at Wellingborough, a magnificent example of Encephalartos Vroomi was staged by Mr. C. Watkins, of Wellingborough. The plant when extended was over 15 feet in diameter and it had some seventy to eighty finely-developed leaves. So much space was required when the leaves were fully extended, that it had to be staged in the open air. Probably it is one of the finest specimens in the country.—R. D.

Pentstemons at Burford Lodge, Dorking.—One of the leading features in the way of hardy plants Mr. W. Bain has provided in the gardens at Burford Lodge is a superb bed of Pentstemons raised from seed sown in January last. The plants are now in full bloom, and the quality of all is very high. Some spikes of these came before the floral committee of the Royal Horticultural Society held on the 23rd ult., and an award of merit was made to the strain. Taking these superb varieties as evidencing what may be obtained from seed, it is obvious that the naming of Pentstemons, unless the varieties have some unusual novelty of character, is scarcely necessary.—R. D.

Commelina cœlestis.—This pretty and continuous flowering plant, although not quite hardy, is worth the trouble involved in lifting and storing its roots through the winter, or with generous treatment it may be successfully grown as a half-hardy annual. A bed of it is pretty at Warley Place. It strongly resembles the Tradescantias, with its erect stems and sheathing bright green leaves. When in bloom it is sure to attract notice by the richness of its colour, the flowers being of a deep Gentian blue. There is also a pure white variety.

Lilium Browni var. leucanthum.—This grand Lily is flowering well in a bed near the temperate house at Kew, and both by its robust habit and fine form completely dwarfs L. longiflorum, which fills the remainder of the bed. The stems are about 4 ft. in height, and the strongest one has five large flowers of great substance, very long in the tube and less reflexed at the tips of the segments than those of the typical L. Browni. The perianth divisions are creamy white, but the tube of the flower is of a lovely shade of soft clear yellow, free from spots or markings of any kind. The flower is also white externally with a narrow green band down the centre of each segment. This is altogether a noble Lily, as robust in habit as it is handsome in appearance. A coloured plate of it was given in The Garden for February 9 of this year.

Cyphomandra fragrans.—A large specimen of the Tree Tomato now flowering profusely in the temperate house at Kew is worthy of inspection, by reason of its distinct habit of growth as well as for its flowers. The branches spread out flat, maintaining a horizontal disposition, arranged as it were in tiers one above the other. The large oval pointed leaves are of a shining glossy green colour and the pendulous racemes of bloom hang from underneath them. It has a peculiarly uniform method of growing and flowering. A secondary branch is produced at every third joint of the growing shoots, starting away at a slight angle, and all the flower racemes appear at the point of divergence. Each raceme has about twenty flowers, which in the bud state are purple, but when expanded greenish yellow, with a purple streak down the centre of each segment. They are each about 1 inch across, but not pleasantly scented, as the name would lead one to suppose.

Tigridia pavonia lilacea.—The Tigridias are now in the height of their glory, the display made in a narrow border beneath a wall clad with Ampelopsis Veitchi by T. pavonia grandiflora, T. p. alba and T. p. lilacea being gorgeous. T. p. lilacea is, however, growing much more strongly than grandiflora or alba, the flower-stems reaching to a height of nearly 2 feet, and the flowers in some cases having a spread of over 8 in. No conception can be formed by those who have not seen these flowers growing in masses of the effect obtained—the brilliant red of T. grandiflora, the ivory-white petals of T. alba and the deep rose-pink of T. lilacea. In splendour no Orchid can rival these Mexican strangers, but the open border suffices for their needs. Make a point of obtaining full-sized and well-ripened bulbs in the first instance, and plant in April. They will do well in any soil but a heavy clay, which should be lightened with road-grit, leaf-mould and sand. In the autumn, when the foliage dies down, the bulbs should be lifted, dried, and stored in sand during the winter. In some favoured spots the bulbs may be left undisturbed. Some years ago I resided in such a locality; the soil was light and shaly, and the border being entirely sheltered from the north and east winds, the Tigridias improved year by year. My attempt to pursue a similar mode of culture in my present garden was nipped in the bud by the loss of the whole of my collection during the first winter, but I find that the little trouble of lifting and storing is well repaid by the lavish display, which is now at its zenith.—S. W. F., *Torquay*.

A VIEW IN HABBERLEY VALLEY.

The pretty view of which an engraving is here given represents a pretty copse. Such as this often occurs near to or even adjoining gardens, offering charming opportunities for pretty gardening too good to be entirely neglected. At Munstead, Miss Jekyll made a delightful Primrose garden in a Birch copse, and in a Sussex garden we once saw a little piece of natural woodland adjoining the kept garden perfectly carpeted with the creeping Forget-me-not, with here and there in open spaces groups of hardy flowers naturalised and perfectly at home. The most beautiful of all spring gardening can be carried out in places like this with a long succession of changing pictures from the time of Snowdrops onwards, but especially in Anemone time, as copses can be as completely carpeted with the Apennine Anemone as they often are by our native wood species. The Daffodil family, too, is a host in itself. Mr. A. T. Bucknall, who sent us the photograph from which the engraving was made, writes as follows:—



View in Habberley Valley, near Kidderminster. Engraved for The Garden *from a photograph sent by Mr. A. T. Bucknall.*

Habberley Valley lies on the north-west side of Kidderminster, at a distance of three miles from the town, and is known as one of the loveliest spots in the midland counties. Lying at the foot of Warshill (commonly pronounced Wassal) Wood, and surrounded on all sides by tree-covered slopes, one enters by the foot-worn rock of red sandstone, and after passing the curve in the road the beauty of the scene bursts upon the spectator. A peculiarity of the place is the amount of silver sand found in the soil.

ORCHIDS.

SMALL-FLOWERED MASDEVALLIAS.

It is difficult to say what it is that is so attractive about the smaller-habited and flowering members of this genus, but the fact remains that anyone once taking an interest in them is not likely to relinquish their culture. The tiny flowers so peculiar in structure and so quaintly set upon the plants have a fascination for keen observers of Nature certainly not excelled and hardly equalled by those of any other Orchid, and many who pass them by as unworthy of notice would probably be charmed by their wondrous variety of form and individual beauty could they be induced to examine them closely. Let anyone who thinks them insignificant do so, and endeavour to describe the different colours, form, and size of any one of them, and possibly before his task is finished he will have altered his opinion. Description, in fact, fails to give any adequate idea of what they are like, and one must view them, and closely too, to realise their many and varied charms. There is nothing particularly difficult in their culture, yet many fail with them, and the reason is not far to seek. Being so small there is not, to use a well-known idiom, much to come and go on with them. Small matters of detail, or what would be small with other kinds, mean a great deal to these, and inattention to their simple wants for a short time only proves very detrimental to their well-being. Perhaps the most important detail in their culture is keeping them free from insects—at least if this is not attended to all others will prove futile. In the presence of red or yellow thrips the plants literally dwindle away, these obnoxious little pests soon over-running the foliage to such an extent that healthy growth is impossible. Their habit, too, renders the use of strong insecticides unsafe, so prevention must be the order rather than cure. As soon as an insect appears the plants should be thoroughly sprayed all over with tepid rain water, and this washing repeated at frequent intervals until a complete riddance has been made. None of these species like much material about their roots, so the smallest sized pots convenient must be used. It is on this account unwise to rear large tufts of these, for by breaking them up the health of the plants is improved, root action being freer, and the stock is likewise increased. The roots are more liable to die off in large pots during the winter, which is an additional recommendation to the use of the smaller pots. The drainage of the pots and quality of the compost must have careful attention, for these little plants enjoy and must have copious supplies of water at the roots, and anything close or heavy about them renders this impracticable. In potting, I usually mix the best of the peat fibre with clean freshly picked Sphagnum points, not using the white, partly decayed portions, and allow half as much peat as Moss. Small crocks and charcoal are ready to hand, but not mixed with this. The drainage being covered with a layer of Moss, a little of the mixture is wrapped round the base of the plant firmly, but not pressed so tightly as to injure the roots. Hold the plant in the exact position required, viz., with the base of the stems about half an inch above the rim, and fill nearly to this with the crocks and charcoal, dibbling in the peat and Moss firmly rather higher up than it is to be left, and trimming all off to a neat cone with a strong pair of scissors or shears. This is a light and porous root-run for the plants, and affords all the sustenance needed. A mild, moist and airy temperature not liable to fluctuations of any kinds is what they delight to grow in. They must be closely shaded from the sun all the summer, yet exposed to all the light possible during the dark winter days. They are rather erratic both in growing and blooming, and seem never entirely at rest; therefore only a little less heat will be required during the winter than the summer months. A capital way to grow these plants, and one that is not practised as often as may be the case, is to plunge the pots to the rim in growing Sphagnum. This keeps a nicely moist atmosphere about them, and does away with a good deal of damping overhead. Great care is, however, necessary that no slugs or other insects are introduced with the Moss, or they will play havoc with the young roots and flower-spikes. Should Sphagnum be difficult to obtain, any other green Moss will do, several native kinds having a very pretty appearance.

With regard to the time of repotting, I should not hesitate to do this at any season if

the state of the compost was so bad as to warrant interference, but possibly, all things considered, the spring is the most suitable time, if necessary removing a little of the surface again towards the end of September and replacing with new and sweet compost. To enumerate one half the species would take far too much space, nor is it necessary to grow them all. The undermentioned are all pretty and free-flowering, and will make an interesting little collection. M. Arminii, M. Carderi, and M. Estradæ, all natives of New Grenada, with lovely tints of yellow, rosy-purple, and violet, M. Dayana, M. triaristella, M. vespertilio, and M. Wageneriana.

B. S.

HYBRID CATTLEYAS AND LÆLIAS.

In most cases the crossing or hybridising of florists' flowers has been a comparatively easy task, the organs of reproduction being conspicuous and well within the reach of the operator. Their rearing has also, when compared with Orchid seedlings, been comparatively easy.

The important results of hybridising Orchids in various parts of this country as well as on the Continent are shown in the numberless forms of Cypripediums and other Orchids which one meets with in every collection now-a-days. The production of these mules, which is due entirely to the gardener's art and skill, has rendered the formation of the line of demarcation between species proper and plants which formerly were considered as mere varieties a matter of much difficulty, as it has now been proved beyond doubt that certain subjects which were held as distinct species were nothing more than natural hybrids, the artificial hybridising between the supposed parents or species with which the subject showed certain affinities having produced the plant expected by the operator.

On account of the close affinity that exists among Cattleyas and Lælias, between which genera the only clear distinction consists in the number of pollinia arranged in single series of four in Cattleyas and in two series of four in Lælias, hybridisation readily takes place between them, and numerous are now the forms obtained from crosses effected between plants belonging to these two closely allied genera. Yet it is worthy of remark that while all the forms of the labiata group upon which experiments have been made, and also the Brazilian species with two-leaved stems, cross freely with each other and with the Brazilian Lælias, which also cross freely with each other, none of the Cattleyas nor even the Brazilian Lælias will hybridise freely with the Mexican Lælias. With the exception of Lælia anceps, which seeds freely whether fertilised with the pollen of a Cattleya or that of a Brazilian Lælia, others have invariably proved failures, for it is on record that although numerous crosses have been apparently effected both ways, and that capsules have been produced, the seed has in every case proved barren.

The first successful hybridiser of Orchids, the late John Dominy, took up the subject in Messrs. James Veitch and Son's nursery at Exeter in 1853. Besides certain distinct forms of Cypripediums, such as C. Dominii, Harrisianum, vexillarium, which even now are among the most distinct seedlings known, also Calanthe Veitchi and other hybrids which he raised at Exeter, he also produced the first hybrid Cattleya—C hybrida picta—from C. guttata and C. intermedia. This was followed by C. Brabantiæ, the result of a cross between C. Loddigesi and C. Aclandiæ; C. Dominiana, between C. maxima and C. intermedia; and the most beautiful Lælia, or, as it is generally called, Cattleya exoniensis, which was one of Dominy's earliest as well as most successful efforts, and of which, on account of the irregularity with which crosses were registered in the early days of Orchid hybridisation, the parentage is unfortunately involved in obscurity. Then came the equally beautiful Lælia Dominiana and L. Dominiana rosea, about the actual parentage of which there is also much uncertainty.

The successes obtained in the Exeter and Chelsea nurseries by Dominy and Seden in raising hybrids at length attracted the attention of others in that direction, and their efforts were greatly helped by the excellent paper read by Mr. H. J. Veitch at the Orchid conference in May, 1885. In the meantime, Cattleya Mitchelli, the result of crossing C. guttata Leopoldi with C. labiata Trianæ, had been raised in 1874 by Mr. Mitchell, gardener to Dr. Ainsworth; Cattleya citrino-intermedia, the only hybrid from C. citrina yet known, C. Harrisi, C. Miss Harris, and Lælia Novelty had been raised by Dr. Harris, of Lamberhurst, Kent. These were followed by Cattleya Baroness Schrœder and Lælia vitellina, raised in Baron Schrœder's gardens; Lælia Marriottiana, raised from L. flava and Cattleya Skinneri by Sir Wm. Marriott; Lælio-Cattleya Brymeriana, raised by Mr. W. E. Brymer, of Dorchester, &c. Messrs. Sander and Co., of St. Albans, have either acquired or raised several hybrids in Cattleya and Lælia; Messrs. B. S. Williams and Son, of Holloway, have raised or acquired a Lælio-Cattleya; Messrs. Low, of Clapton, have exhibited one Lælio-Cattleya; Mr. Lewis, of Southgate, is credited with two Cattleyas, and Messrs. Backhouse, of York, with one, while Mr. Statter, of Stand Hall, Manchester, has raised Lælio-Cattleya Clive.

Continental Orchid growers and amateurs have also lately added to the list of garden productions, but it is worthy of remark that while in Belgium a considerable number of hybrids has been obtained, the efforts of the raisers appear to have been directed towards the production of Cypripediums only. The first Cattleya hybrid raised on the Continent (C. calummata) was obtained by Mons. A. Bleu at Paris, and is the result of a cross between C. intermedia and C. Aclandiæ. The same raiser also obtained C. amœna by crossing C. Loddigesi with Lælia Perrini. Lælia juvenilis, also of Bleu's production, is the result of a cross effected between L. Perrini and L. Pinelli marginata. Cattleya Vedasti, raised in Paris by Mons. Perrenoud, is a distinct hybrid produced by the crossing of C. Loddigesi and Lælia Pinelli marginata. The same raiser also succeeded in producing C. Alberti from crossing C. intermedia and C. superba. To M. Ch. Maron, gardener to Mons. Darblay at St. Germain-les-Corbeil, France, we are also indebted for several hybrid Orchids. None are recorded from Germany; but Lælia Horniana, which is said to be a very distinct plant, was raised by M. Horn, who has charge of Baron Nathaniel de Rothschild's collection at the Hohe Warte in Vienna. By far the most brilliant, as also the most interesting, of all the hybrid Cattleyas of garden origin raised on the Continent, however, is undoubtedly C. Mantini. It is the result of a cross between Cattleya Skinneri Bowringiana as seed parent and C. Dowiana aurea as pollen parent, and, as might have been expected, the offspring from such parents is a really handsome plant, a robust grower and a most important addition to the section of autumn-flowering Cattleyas. The first plant of it was exhibited in Paris at the meeting of the Société Nationale d'Horticulture, when it created quite a sensation among Orchid amateurs and growers, and when first honours were unanimously awarded to it. A most remarkable point in connection with this beautiful seedling, and one which may be taken as a sure indication of its being a particularly free-flowering plant, is its comparatively rapid growth and free-flowering character, for M. Mantin tells us that the hybridisation took place in October, 1889, the seeds were sown in November, 1890, and two plants flowered for the first time in October, 1894.

Now that numerous crosses have taken place in all parts of the country we may expect many plants of distinct character, but it is doubtful whether we shall have to record many new-comers of more striking appearance and of more sterling value than are possessed by some of the hybrids above mentioned or described.

S. G.

Cypripedium caricinum.—This singular, but pretty species does not meet with much favour among Orchid growers, possibly on account of its shy flowering habit, and I know of cases where its culture has been given up entirely for this reason. Still, while many growers do not succeed in flowering it, in other places it never fails to bloom annually and well. I believe the most frequent cause of failure in growing it is too much heat. Being a native of Peru, its natural associates are Odontoglossums and kindred Orchids, and with these it should be grown. The leaves are quite distinct from those of any other Cypripedium, being narrow and almost Grass-like in appearance. They are deep green and grow in tufts upon a creeping above-ground rhizome. The flower-spikes rise to a height of about 16 inches and produce the flowers successionally as soon as the first ones fade, others taking their place. These are pale green in colour, the petals being brown or crimson on the ends, with a white wavy margin; the sepals are similar in colour, but not so much twisted as the petals. The lip is curiously formed, a tuft of black hairs ornamenting the staminode plate and variously coloured spots the enfolding portion. The compost for this species must be holding and the drainage free and open. Good fibrous loam and peat in equal proportions with chopped Sphagnum and charcoal will grow it well. Abundance of water is required during the growing season, occasional sprinklings overhead being also of service. A friend of mine who is very successful with this species keeps it quite dry for a few weeks in winter, and although this seems strange practice for Cypripediums, in his case the end amply justifies the treatment. In any case a slight cessation of growth is an advantage, and if this does not occur naturally the partial drying system is to be recommended.—H.

Oncidium ornithorrhynchum albiflorum.—This, the white-flowered form of Oncidium ornithorrhynchum, first bloomed in the collection of the late Mr. J. Day at Tottenham in 1873 from amongst an importation of the species from Guatemala. It has always been a scarce and valuable plant and is generally considered difficult to grow. The plant that was exhibited on October 23 of last year at the Drill Hall by Mr. R. I. Measures, Cambridge Lodge, Camberwell, and gained a first-class certificate, is again throwing up its flower spikes. The treatment adopted with this plant was as follows: After flowering the plant was put at the warm light end of the intermediate house close to the glass, and was kept a little on the dry side until the growths began to make their appearance. Then water was given more freely, but with care during the severe weather in the winter and early spring. In the beginning of June the flower-spikes made their appearance. The plant was allowed to remain in the same position in the house until the second week in July, when the spikes had grown to from 12 inches to 15 inches long, when it was removed to the Cattleya house. The motive in view for removing the plant into a higher temperature was to endeavour to get the flowers expanded

before the fogs set in. Two years ago it was allowed to remain in the same house it had been grown in, when the buds were all destroyed by fog. Last year the warmer treatment, as stated above, proved so successful, that it has been adopted again. The plant is now showing fifteen flower-spikes, and when the flowers have expanded it will be removed to a cooler and drier house, where the flowers continue in perfection for several weeks. The material used in potting the plant is about two-thirds good fibrous peat and one-third Sphagnum Moss, with just a sprinkling of finely broken crocks. The whole surface should be covered with good living Sphagnum.—Stelis.



Trichopilia suavis. From a photograph sent by Miss Willmott, Warley Place, Essex.

DENDROBIUM CHRYSANTHUM.

Dendrobiums will always be a favourite genus with Orchid growers, being in nearly every case useful, free-flowering and attractive Orchids. The subject of this note is no exception to the rule, and has the additional advantage of flowering after the majority of the other kinds are over. Though a deciduous species, it requires different treatment from that given to the Wardianum and similar types of the genus. The blossoms are produced about now upon the growths that have been made this season, often while the leaves are still green. These are of a beautiful golden yellow with maroon spots inside the prettily fringed lip. They are also sweetly scented, but, unfortunately, do not last longer than a couple of weeks. After the blooms are over the plants sometimes rest awhile, but they must not be forced to do so if they seem inclined to grow. As soon as signs of growth are apparent the plants must be placed in a nice genial temperature to induce them to grow strongly, and when the young shoots have attained a length of about 2 inches they must if necessary be repotted. If left longer the roots will be pushing from the base of the pseudo-bulbs, and these will be injured in the operation of potting. Fairly large pots may be used, as D. chrysanthum is a vigorous rooter, and the compost should consist of rough lumps of peat, Sphagnum Moss, and charcoal broken to the size of a Hazel nut. Care will be necessary with the watering until the roots are well through the compost. The plants should not be watered until well on the dry side, as indicated by the Sphagnum looking whitish and feeling rustling and springy to the touch. Enough must then be given to moisten it thoroughly and the plants left till they are again getting dry. The growth must be kept gently moving all through the winter and hastened on in spring by increasing the temperature. It likes a light position not far from the glass and an abundant supply of water to the roots. This Orchid frequently produces young plants upon or towards the end of the last matured pseudo-bulb, which may be taken off when they have had a season's growth and set going on their own account, nice healthy specimens being the result of grouping half-a-dozen or so of these in a pot or basket. D. chrysanthum was introduced from Burmah in 1828.

TRICHOPILIAS.

This genus contains several really good and useful species which ought to be represented in all collections. Botanically, they resemble Oncidiums somewhat, but are quite distinct from the latter genus. Pilumnas are by some authorities merged into Trichopilia, but for garden purposes this would be a mistake. Trichopilias are all natives of Central America, and thrive best in a temperature distinctly higher than that of the coolest house. If there is no compartment intermediate between this and the Cattleya house, they will be better arranged in the coolest part of this latter structure, and so placed that they receive the full benefit of the ventilation. In habit they are pseudo-bulbous, and each bears a single leaf. The roots are not so persistent or strong as in some other kinds, and on this account considerable care is needed in preparing the compost and in watering. The usual peat and Moss mixture is suitable, provided it is kept in good order by efficient drainage and plenty of crocks and charcoal intermixed. While growing freely, plenty of water at the root is necessary—in fact, much more than is required by some stronger, more gross-growing plants, but after the pseudo-bulbs are formed this must be considerably lessened, and the growth well exposed to light and air in order to ripen it, without which it is useless to expect a good flowering return. During winter the plants only need enough water to prevent the pseudo-bulbs shrivelling, but an unduly dry atmosphere should even now be guarded against, as they are rather subject to the attacks of red-spider and thrips. The best time to repot Trichopilias is soon after the flowers are past and before the plants have made much growth. The base of the pseudo-bulbs must be kept well above the rim of the pot and water carefully applied at first. They are all suitable plants for amateurs and beginners in Orchid culture, for they are mostly cheap and easily grown. The flowering return, moreover, is ample, and, if all the species are grown, spread over a considerable season. Newly-imported plants are quickly and easily established by potting them up in clean crocks and placing them in the warmest part of the Cattleya house, giving a little compost as soon as the roots begin to show. A few of the better-known kinds are mentioned below.

T. crispa is a somewhat variable kind, a native of Costa Rica, and brought to this country about 1850. It is possibly the most free-flowering of all, the blossoms being produced in succession from the base of the pseudo-bulbs in racemes of two and four. The sepals and petals are wavy, usually brownish crimson, frequently edged with white or pale yellow. The lip is deeper in colour than the sepals, spreading in front, the lower part enfolding the column. The throat has usually a stain of deeper colouring. It flowers at various times in the year, but usually during spring and

early summer. The var. marginata is a larger-flowered variety, usually blooming later in the season. The sepals, petals and lip of this kind are more or less edged with white.

T. Galeottiana is an inferior plant to the last-named, the flowers not being so bright in colour. It flowers in autumn and has greenish yellow and brown blooms, produced on one or two-flowered scapes. This, too, is variable, some forms being much superior to others. It is a native of Mexico, introduced in 1859.

T. marginata is another species in the way of T. crispa, one variety (lepida) being very similar. Indeed, it is questionable whether they are really distinct species or simply seedling varieties, but that is a matter for botanists rather than gardeners. The flowers are each upwards of 4 inches across, brownish purple in ground colour, the lip bold and spreading, the sepals and petals margined with yellow.

T. suavis, as will be seen by the accompanying illustration, is a beautiful large-flowering species deserving of the most extended culture. The pseudo-bulbs are about 2 inches high, very thin, and each bears a large deep green leaf. The flowers are very fragrant and produced from March to midsummer on short, decumbent spikes, which spring from the base of the pseudo-bulbs. The sepals and petals are not so much twisted as in the other species, creamy white, occasionally spotted with red. The lip has a yellow throat, the side and front lobes spotted with violet-rose. The variety alba is wholly white, save a blotch of yellow on the throat, while grandiflora is a stronger growing, larger and brighter-flowered Orchid than the type. T. suavis grows naturally at great elevations in Costa Rica, whence it was introduced in 1848.

T. tortilis is an easily managed, free-flowering species, very ornamental if well grown. The flowers are produced in summer and are remarkable for the twisted sepals and petals. These are brownish red, margined with yellow, the lip white in front with bright red spots, the inside of the tube crimson. Introduced from Mexico in 1835.

R.

SCHOMBURGKIAS.

Many of the species of this genus are rather small flowering and not particularly attractive, but a few deserve a place in collections where variety is looked for. They are South American plants, epiphytes, with erect leafy pseudo-bulbs a good deal like Cattleyas in habit and appearance. The flowers, proceeding from the apex of the pseudo-bulbs, are borne on long, upright racemes mostly towards the top. Some growers have found Schomburgkias rather difficult to flower, but a good deal depends upon how they are treated. All of them seem to like a light sunny position in a brisk moist temperature, the shading only being let down during the middle of the day to prevent the foliage being scorched. As much air as possible consistent with a high temperature should be allowed, as this conduces to a firm and solid growth and tends to keep the plants to their proper season. Growing under these conditions, obviously a good deal of water will be needed at the root, and this supply must not be in the least lessened until the pseudo-bulbs are quite finished. After this both heat and moisture must be reduced, not all at once, but gradually. Towards the middle of winter the plants may be kept perfectly dry with advantage, but the temperature must not rule too low. The Cattleya house is, in fact, the most suitable place for them, and they must be kept well up to the light even while resting. A little water will again be needed at the roots as soon as the spikes appear, and the supply increased as these develop and the plants are again on the move. Pots or baskets, as most convenient, may be used, the former perhaps for preference. They must be filled rather more than halfway up with drainage, and a layer of Moss placed over this. Three parts of Sphagnum to one of good peat fibre, with some rough pieces of charcoal or potsherds, will be a suitable compost, and in potting or basketing, this must be laid firmly about the roots, the base of the pseudo-bulbs being kept well above the level. A few neat stakes will be required to fix the plants in position, as it is important that they do not rock about after being disturbed at the roots.

S. Humboldti is comparatively rare, though an old species described by Reichenbach as far back as 1848, and this was years after its first discovery. Its flowers are bright purple with a yellow centre to the lip.

S. Lyonsi was introduced from Jamaica in 1853. It is a beautiful kind, well known and interesting on account of its being one of the few exotic Orchids that are self-fertilising. It grows about a foot high and bears strong erect spikes of bloom. The individual flowers are from 2 inches to 3 inches across, the sepals and petals narrow, rosy white, with purple spots; the lip also white spotted with purple and sometimes margined with greenish yellow.

S. rosea is another very old species found growing naturally on rocks at a great elevation in Sierra Nevada. The sepals and petals are deep purple, the lip light rose. It is said to be very free flowering and to produce shorter racemes than the majority of this species.

S. Thomsoniana is a more recently introduced species, named in honour of Mr. W. J. Thomson, of St. Helens, with whom it first flowered. The blossoms occur on erect racemes and are light yellow on the segments, the labellum white with dark purple markings.

S. tibicinis is a strong-growing handsome kind, popularly styled the Cow-horn Orchid. The flowers are upwards of 2 inches across, the sepals and petals crimson-purple with maroon tips, the lip orange-yellow streaked with purple on the side lobes, the front usually white. Some variations exist in this species, the best form being that known as grandiflora.

S. undulata was found growing on rocks at an elevation of 2400 feet near Pandi, New Grenada. The sepals and petals are wavy, brownish purple, the lip rose coloured, with white lines on the crest.

H.

THE WEATHER OF THE PAST SEASON AND ITS EFFECTS ON THE GARDEN.*

I am glad that our secretary has put this heading to my paper. It is the same as the heading to my paper this time last year, and it at once suggests that what I have to say on the subject this year is not anything very new, but is a continuation of last year's paper. And this is exactly what I wish to bring before you now, for the condition of the garden this year is so intimately and curiously connected with the weather and its effects on the garden last year, that my last year's paper is really quite incomplete without this year's record. I suppose none of us can remember two successive years so entirely unlike as 1893 and 1894. The one bright, clear, dry and sunshiny beyond all experience, the other dark, cloudy, wet and sunless to a really unpleasant extent; and yet I have little doubt that as the weather of this year was to some extent the result of the weather of last year, so I am sure that the condition of the garden was far more brought about by the weather of 1893 than by the weather of 1894.

Let us very shortly see what the weather has been since December 1, 1893, to November 30, 1894. Up to December 30 there had been but four days of frost, on one of which, the 3rd, the thermometer fell to 19°, but the 31st brought in ten consecutive days of frost, not very severe except on the 5th and 6th, when the thermometer fell to 14° and 13°. There was again frost on the 23rd and 24th. The rainfall of December was 2·59, and of January 2 63. In February there were five days of slight frost, and the rainfall was 3·43. In March there were four days of slight frost and the rainfall was 2·15. April was a fine month; there was no frost, but there was a rainfall of 2·17. In May there was one frost on the 20th; here in Bath and the neighbourhood it just touched 32°, though in some parts of England it was much more severe. Here it would have done very little mischief, but unfortunately it was followed by a day of bright sunshine, and the effects were disastrous and far-reaching; and I shall have more to say about it further on. The rainfall of May was 2·12, of June 2·19, of July 3·46, of August 2·67, of September 3·12, o October 4·30, and of November 5·49,* andf there were no autumnal frosts until the morning of December 1. The total result was that during the twelve months there were but twenty-six days on which the thermometer was below the freezing point, and the accumulated degrees were 151. That is really a very small amount of frost, and when you add to this that nearly the whole of this was in the early part of January when vegetation was for the most part dormant, and that the low readings probably lasted for a very short time, we may say that the minimum temperature was much above the average. But the rainfall was also much above the average; it amounted altogether to 36·34. This great amount of rain of course implies a great amount of cloud, and that means a small amount of bright sunshine; and even on days when there was no rain the sky was dull and sunless in an unusual degree.

Such (very shortly stated) has been the weather of the last twelve months, and now we can see what were the effects on the garden, and we shall at once see that the effects were largely brought about by the bright weather of 1893. In my last paper I ventured to make two forecasts; one was that we were not likely to have a very severe winter, and we certainly had not, for we cannot call that a severe winter in which hard frost only occurred on a few days in December and ten days in January. The other forecast upon which I ventured was that the long hot summer had added so much vital strength to all plants, that this year would be a good year for flowers and fruit. That forecast was almost but not quite right, and it would have been quite right but for the frost of May 20. From all parts there came the same record. In my own garden the flowering shrubs were laden with blossoms with a profusion that I never saw before; and from Kew the report was that in every portion of the gardens the flowering was quite phenomenal. Among the early flowering shrubs the Magnolias were perfect pictures of healthy bloom; fruit trees of all sorts were sheets of blossom, and Roses were full of promise; and so through all the flowering trees and shrubs, till we arrived at the Tulip Trees and Catalpas which were thickly covered with flowers. Unfortunately, in a large amount of this fair promise we were doomed to disappointment. The May frost destroyed all blossom that was in a certain stage; Pears, Plums, Peaches, and Apricots

* "The Weather of the Past Season and its Effects on the Garden." By Rev. Canon Ellacombe. Read before the members of the Bath Natural History and Antiquarian Field Club, December 12, 1894.

* I have taken these rainfall amounts from the record kept by Rev. C. Miles, Almondsbury. They are slightly in excess of the Bath record, but I think they are more accurate for Bitton.

had passed that stage and were comparatively unhurt; but Apples, Walnuts, Strawberries, Raspberries, and Currants were in many cases so injured in their blossoms that they bore little or no fruit, except in the few cases in which they were so forward as to be beyond injury, or so backward as to have their flowers unformed and so were saved. Gooseberries had heavy crops, and so had Pears and Filberts, but there were no Walnuts. Peaches and Apricots also had heavy crops, but owing to the wet and lack of sun the fruits not only ripened badly, where they ripened at all, but to a great extent they rotted on the trees. Bulbs were not as good as I had expected them to be, and I suppose, especially with the Lilies, that they have not recovered the drought of 1893.

The year was marked in a very unpleasant degree by two pests, weeds and earwigs. Among the weeds Thistles were especially abundant, and this abundance of Thistles was remarked not only all over England, but in many parts of Europe, and to an alarming extent in America. In my own garden I was not pleased to see a great number of Thistles of species which I had never noticed before, and the farmers in the neighbourhood told me the same tale with respect to the Thistles in their fields; they were very abundant and not of the common kinds. Grass was another weed that gave great trouble in the gardens, and for both the Grass and the Thistles we undoubtedly had to thank the hot weather of 1893, which ripened every seed. The Thistles will probably disappear, certainly in gardens and fields where they have not been allowed to seed; the Grass may give some little trouble in our flower beds, but it can be easily removed. Of the other pest I mentioned, the earwigs, I am not sufficiently an entomologist to say whether the abundance this year was at all owing to the last hot summer, but everywhere they were very abundant, and their special mission seemed to be to make holes in the wall fruit before it was ripe, into which the wet entered, and the fruit rotted on the tree. I very seldom have been troubled with earwigs in my garden, so if this year's abundance was owing to the bright weather of last year, I may hope that the dull weather of this year will clear them away.

I am afraid that among the effects of this year's dull summer must be mentioned a large amount of grumbling, and certainly it has not been a year in which there was a prolonged enjoyment of out-of-door life. Yet, like every year, this year with its peculiar weather has had its uses, and has had its own special lessons. Among the uses must be reckoned the ample supply of rain, which will go far to restore the average, and to make up the deficiency caused by last year's drought, and I certainly have learned more than one good lesson in garden work. I have never before had the lesson brought home to me so closely that all the beauty of our trees, our hedgerows, and our gardens is not produced by the particular weather of the one year through which we may be passing, but that it can all be traced back to many previous years. Perhaps it is not too much to say that whatever the beauty of a tree or shrub may be this year, it has got some of that beauty by little and little in every year of its existence. I have mentioned the phenomenal abundance of flowers this year on almost all trees and shrubs, but I should also have noticed the abnormal growth of this year's branches. I am sure that in many cases the growth of the branches on our trees and shrubs with corresponding abundant foliage has been quite three or four times the usual annual growth,* and for this we have to thank not the wet weather of this year nor the bright summer of last year, but the two combined. This year's wet would not by itself have produced the unusual growth, but it has largely helped it, and last year's heat would not have been sufficient to produce the effect if it had not been followed by this year's dripping summer. And I am sure also that we may go back much farther, and trace something, however little, in every year of the life of the tree or shrub that has helped to produce what we have seen this year. The vigour of an old tree or shrub is as much dependent on its vigour when it was young as the vigour of our manhood and old age depends largely on the vigour of our childhood and boyhood. This may seem a truism not worth notice; but though I am not one of those who think that every plant and animal was created for the use or pleasure of man, yet I do think that it adds something, perhaps much, to the pleasure of our gardens to think how the beauty of our gardens has been slowly growing up for our delight year after year, "man knoweth not how"; and it surely adds to the pleasure we may have, in planting and carefully tending young trees and shrubs, to think that what we are doing now is to give pleasure or profit in many distant years to those who will then be looking at them when we ourselves are passed away. Perhaps one or two instances of the way in which the vegetation of one year is provided more by the year or years that went before than by the present year may be interesting. If you take up a Grape Hyacinth now or a little later, you will often find the flower-spike not only perfectly formed, but even coloured some months before it shows above ground. If you bisect a large Fern, say a full grown Filix-mas in the summer, you will find no less than the growth of four years strongly shown. There are the outside fronds of last year; there are the full-grown fronds of this year; at the top of the throat (if I may so call it) you will find the crown of next year's fronds neatly curled up, and below that you will find the crown of the fronds of the year after next closely packed, but perfectly visible. The Tulip bulb has something of the same character; each bulb contains the flowering bulb of three years. The old writers said that you could also find the flowers of three years, but that is not confirmed by modern observation. The main fact, however, remains that no plant and no living organism except annuals, and perhaps not even annuals, contain only the growth or the flower of one year only.

Another lesson which I have learned from the weather of the years 1893-94 is the immense value of a

Hot Dry Summer.

I knew the value of such a summer in ripening the wood, but I never sufficiently observed that the effect went much further, and especially in warming the ground. Though the frosts of last winter were severe for the short time they lasted, they did very little mischief, and I put that down to the large amount of heat which was stored up in the earth during the long hot summer of last year. I am sure that this is one great secret of the way in which half-hardy and even tender plants are grown successfully in one garden and cannot be grown at all in a garden which may be a near neighbour. Soils vary greatly in the way in which they can take in and retain heat, and this partly depends on their position being sheltered or otherwise and well drained, but far more on their constituent parts. A loose friable loam, especially on sandstone, with a gravelly subsoil will absorb and keep an amount of heat which a wet clay soil can never acquire, and this heat shows itself not only in the abundant and healthy growth of all plants grown in it, but it shows itself also in the power of resisting frost. People are apt to talk of a frost as if it was something that came down from the skies and caught hold of the earth, whereas the simple explanation of frozen ground is that the radiation of heat from the ground is not equal to the cold atmosphere above it, and the depth to which frost penetrates is largely determined by the amount of heat in the earth, and so wherever means can be found to keep in the heat which exists in the earth, and wherever the earth is so warm that it can retain its heat in spite of all the cold air above, there frosts do little or no damage. This explains the difficulty which people who have been in the tropics often speak of, when they have seen beautiful tropical flowers growing in places where there are often sharp frosts; the earth has been so roasted by the tropical sun that a few degrees of frost lasting a very short time have no effect on the plants. It explains, too, how the possibility of growing tender plants does not so much depend on latitude, for there are parts in the north where many things can be grown which we cannot think of. At Castlewellan, in County Down, nearly four degrees north of us, Lord Annesley grows a marvellous collection of plants which we should consider too tender to attempt here, including a large number from Australia, New Zealand, and the Cape. When I tell you that his catalogue of hardy plants contains eleven species of New Zealand Acacias and nineteen species of Eucalyptus, you will get some idea of what can be grown there. The garden is on a granite soil, and within the influence of the Gulf Stream, there very narrowed. It explains also why many things cannot be grown in England. There are parts of Sussex and Cornwall which are in the same latitude as parts of the champagne district of France, but their soil is not warmed by the sun of France, and so they cannot produce champagne. And this explains also the value of mulching of all sorts; any kind of mulching is simply a device to prevent the radiation of heat from the earth, and so keep warmth at the roots. Mulchings simply act like great coats; there is no real heat in either, but the mulching prevents the escape of the heat of the earth just as the great coat prevents the escape of the heat of the body. I use many devices to serve as mulchings or protections, boards, slates, old casements, bell-glasses, flower-pots, &c., and it is wonderful how very little will suffice. You may see that by the way in which even in severe frosts the ground is often soft under trees and shrubs, and in early autumn you may sometimes see every blade of grass covered with cold dew, while there is none on the Plantains and Daisies. The flat leaves, though comparatively small, are enough to prevent the radiation of heat and so prevent the condensation which produces the dew; but the readiest example is Nature's own beautiful covering of snow. When the snow lies deep and the weather is cold you may send a stick through a thick coating of ice or frozen snow at the top, but below the snow the stick will go into soft ground; and even when the weather is cold and there is no sun, the snow is melted from beneath by the warmth of the earth. In America

* I may mention as instances of the luxuriance of the foliage this year, that on the Paulownia grown as a shrub I had leaves 22 inches in length and 26 inches in breadth, and that on the hardy Japanese Banana (Musa Basjoo) I had leaves more than 4 feet long and nearly 2 feet broad.

a good protection against frost is found in brown paper steeped in sulphuric acid and made tough and waterproof, and a newspaper spread over a plant when frost is expected is often quite sufficient to protect it. I must say something on the

Autumnal Tints

of this year; they were very late and very poor. In my own garden I could scarcely see a single specmen that was well coloured, and in many cases the leaves fell green, or just browned; and in some cases they did not fall at all. This poverty of tints was not at all confined to Bitton. We have in this neighbourhood two places in which very extensive planting has been carried out with a special view to beauty of autumnal tints, Tortworth and Weston Birt. At Tortworth the trees were very poorly tinted, and the gardener at Weston Birt reported to me that it was the same there; and I have in my garden a shrub given to me by the late Mr. Holford, Euonymus Thunbergianus, as the shrub which he considered the most beautiful of autumnal shrubs, but this year the leaves are still green in December, and show no signs of colouring. This want of colour may be entirely put down to the want of sun during the summer; leaves require good sunshine to develop their colours as much as flowers do, and that they were unusually late may safely be put down to the frosts of May. The cold weather of the third week in May put back vegetation at least three weeks; and leaves, like the trees they grow on, have their allotted length of life, and if not destroyed by frosts or winds prematurely they run their full course, and if they are three weeks or a month late in the usual time of budding, they will be three weeks or a month late in their decay, especially if their life is prolonged, as it was this year, by a mild October and November. The mildness of these two months was one of the chief climatic features of the year, and the effects in the garden were very marked. On November 30 I noted the following plants in flower, omitting varieties, such as different sorts of Roses, &c.:—

Scarlet and other bedding Geraniums
Datura sanguinea
Fuchsia globosa
corallina
gracilis
Ceanothus azureus
Gloire de Versailles
Ivy
Helleborus niger altifolius
Borago laxiflora
Veronica parviflora
Rosa polyantha
involucrata
many hybrids
Meconopsis cambrica
Hydrangea porphyroclados
rosalba
Callirhoe involucrata
Achillea umbellata
Eryngium creticum
Potentilla formosa
Primroses
Caryopteris mastacantha
Lavatera adsurgentifolia
Teucrium purpureum
Olearia Forsteri
Aponogeton distachyon
Double Calla
Erigeron mucronatum
Hypericum Moserianum
Convolvulus cneorum
Kniphofia triangularis
Doronicum cruentum
plantagineum
Iris stylosa
Cytisus capitatus
Genista umbellata
Groundsel
Lamium album
Allium glaucum
Oxalis floribunda
Nandina domestica
Linum flavum
Double Helianthemums
Strawberries
Scarlet trumpet Honeysuckle
Lavandula Stœchas
Tropæolum tuberosum
Erica carnea
multiflora
Pyrus japonica
Yellow Calceolaria
Yellow Wallflower
Garrya elliptica
Hazel catkins
Spiræa Bumalda
Helleborus fœtidus
Lychnis dioica plena
Anthemis tinctoria
Gaillardia
Erigeron philadelphicus
Anemone hortensis
Daisies
Coreopsis
Achillea ptarmica plena
Ruta crithmifolia
Rudbeckia hirta
Campanula Bourgati
Portenschlagiana
Primula polyantha
Nasturtium, bedding varieties
Geum coccineum
Pampas Grass
Red Pentstemons
Euphorbia Characias
Eupatorium riparium
Geranium Endresi
striatum
Robertianum, red and white
Salvia Bethelli
Crocus pulchellus
Dandelion
Sida Napæa
Chrysogonum virginianum
Abelia chinensis
Solanum jasminoides
Rubus rosæflorus
Fatsia japonica
Hypericum patulum
Aubrietia purpurea
Berberis Darwini
Polygonum affine
Hieracium pictum
Achillea Millefolium
Cyperus longus

While of fruits more or less ornamental there were the Snowberry, Cotoneasters of several species, Pyracantha, Rose heps, Blackberries, Diospyros tchi-tchi (this year a fine and very handsome crop, though there were none last year), Physalis Alkekengi, Hymenanthera crassifolia, Pyrus Maulei, and Iris, and Holly berries very abundant. I have no fruit on the Hawthorns nor on any species of Cratægus, but in the park Cratægus coccinea was laden with beautiful fruit, and a collection of the fruit of different species of Cratægus was sent to me from Weston Birt, which, for richness of colour and size of fruit exceeded any I had seen before.

Of course I do not mean to say that all these ninety-five plants that I have named were in their full beauty of flower, and many of them were quite out of their right season, but they were all visible on November 30, and that they were so must be put down to the mild weather of October and November, aided, I am sure, by the hot season of 1893.

An interesting question remains: what will be the effect of this season on the future lives of our plants? In all trees and shrubs that are completely hardy the result will be nothing but good; it will be a marked season in their lives and add perceptibly to their size and beauty. But in the case of trees and shrubs that are a little tender we must speak more doubtfully. If the winter should be unusually severe and prolonged, the effect would probably be very disastrous; but if the severity should be only average, I do not think we need have much fear. The abnormal growth may be a weakness, and as a general rule we should say that such a growth in a sunless summer must be weak and sappy, but I think it is not so. The wood, it is true, cannot have been much ripened by the sun, but the growth took place so early in the season, that I think it possible and even probable that the wood is ripened by its own natural growth; and so I look forward to the winter with some anxiety, but not with much fear.

I must now bring my long paper to a close. It has much exceeded the limits within which I proposed to keep it, and if it has too much taxed your patience, I hope that you will draw the right moral from it, and in future years, when you are looking out for writers of papers for your winter session, take Horace's advice slightly altered,

"Præsidentem fugito, nam garrulus idem est."

Narcissus freak.—Some three years since when flowering a large batch of Narcissus princeps under glass I noticed some very distinct from the type. Selecting the most worthy, I ranged them while still in flower, and, numbering them, planted them in due course. In the first year after planting nothing unusual was noticed. Good bulbs were formed, however, and in the autumn of 1894 I planted them in rows side by side. The growth this year has been strong and vigorous, and all the selected kinds ripened and died down much about the usual time, with one exception. Now on July 20 this one, of which I have only four or five bulbs, is as fresh, green, and full of vigour as one expects to see in March or April. There is no sign of ripening in the foliage whatever, a curious circumstance in such a tropical summer as this, and when the majority of kinds all around have ripened long ago. In very wet, cold, and sunless summers some of the poeticus tribe have a tendency to long retain their foliage, but I have had no such experience with any trumpet kind before, and am inclined to allow it to run its course.—E. J.

Garden Flora.

PLATE 1025.

SOPHRONITIS GRANDIFLORA AND ANGRÆCUM LEONIS.

(with a coloured plate.*)

Sophronitis.

This is a small genus consisting of only a few distinct species, S. grandiflora being the largest and most brilliantly coloured. It was founded early in the century by Dr. Lindley upon S. cernua, the generic name as applied to S. grandiflora being seemingly inapplicable. Botanically they resemble Cattleyas, and hybrids have been raised between them. None of the species take up much room and all may be grown in small shallow pans suspended from the roof. Three parts of Sphagnum Moss to one of peat fibre will make a suitable compost for them and a very thin layer only is required. They must be kept fairly moist while making their growth, but dislike large quantities of water poured about them, being best dipped in a pail or tank. A mild and airy temperature, rather higher in winter and summer than for the Odontoglossum house, suits them well, and they must never be dried during the winter. This latter season is when they usually flower, and consequently the plants must be well nourished, though overwatering is equally injurious. The size of the flowers when compared with that of the growth is remarkable, and as a good proportion of the energy of the pseudo-bulbs must be expended in perfecting these, it is obviously wrong to leave them too long upon the plants. If left and kept in a dry atmosphere the blossoms last five or six weeks in fine condition, but from three weeks to a month is quite long enough to leave them on.

S. cernua seldom exceeds 2 inches in height, the tiny pseudo-bulbs clustering very closely together and forming a dense cushion-like tuft. The leaves are roundish, about 1½ inches in length, the pseudo-bulbs dark bronzy green. The racemes are short and proceed from the axils of the leaves, each bearing from six to nine flowers about an inch across, bright rose with a yellow lip. A native of Brazil; introduced in 1826.

S. coccinea is sometimes classed as a separate species, but other authorities make it a variety only of S. grandiflora. Both the habit and colour of the flowers vary, some plants having short bulbs and leaves, others being longer, and although some Orchid growers affect to pick out the colours by the habit, this cannot be depended on. The flowers of coccinea are bright scarlet, and both this and the typical

S. grandiflora are natives of the Organ Mountains, in Brazil. No description of this is necessary, the flower in the illustration being a capital likeness. It is the strongest grower of all, and will thrive with more material about the roots than S. cernua. It is none the less truly epiphytic and does much better under than overpotted. Introduced in 1837.

S. violacea is smaller even than the first-named, and although less showy than the others, is, nevertheless, a pretty and pleasing little Orchid. The little pseudo-bulbs are slightly

* Drawn for The Garden by H. G. Moon in Messrs. Sander's nursery at St. Albans, Jan. 15, 1895. Lithographed and printed by Guillaume Severeyns.



swollen in the centre and about 1 inch in length. The flowers are of a delicate soft rosy purple, each 1 inch across, and occurring principally in ones or twos. This is also a native of Brazil; introduced from the Organ Mountains in 1840.

Angræcums.

That figured belongs to the smaller-growing section of the genus that thrives best in small wood baskets suspended from the roof of a tropical house. They are rather more difficult to grow than the larger habited kinds, but if their wants are anticipated and provided for before they suffer from want of these attentions, they will not be much trouble. In the first place, a lot of close material about the roots must be rigorously avoided, for this means simply death to the plants. The roots in their native habitat, twining about the smaller branches of trees and in similar positions, cannot have anything to surfeit them, but instead are exposed to air and light to an extent hardly possible with those of cultivated plants, and while not advising cultivators to follow Nature too literally, yet to take their cue from her and adapt it to circumstances is the surest road to success. The baskets should have several large lumps of charcoal placed in the bottom, not so loosely as to rock about when moving them about, and the plants should be tied into position. Over the roots a thin layer of Sphagnum Moss is all that is needed, the quantity varying with the strength of the plants and the likings of the various species. The utmost cleanliness is essential, and all decayed portions of Moss or roots should be cut away before placing the plants in position. During the growing season a light shade will be required, but this must be removed in autumn as soon as it is safe to do so; for although Angræcums have no pseudo-bulbs to ripen, yet the leaf system must be consolidated if the plants are to flower freely and pass the winter in safety. Like all distichous-leaved Orchids, the roots of the Angræcums are indicative of the resting and growing seasons, the points greening and getting active in spring and clouding over again in autumn. Thus, it will be readily seen when the supply of water must be increased or diminished, but the plants will not require much drying at any time, nor must the temperature fall below 60° during winter. They are rather subject to the attacks of white scale, these insects frequently appearing in winter while the atmosphere is somewhat dry. In cleaning them the roots that are above the compost must be examined as well as the leaves, for the scale is often to be seen on these, and great care is necessary in its removal. The undermentioned are all useful free-flowering kinds, the blossoms all lasting a considerable time in perfection.

A. articulatum is a dwarf-growing plant, with leaves 4 inches or 5 inches long, from the axils of which the flower-spikes proceed. The flowers vary a good deal in shape, and also in the number produced upon the racemes, but all the varieties are extremely chaste and usually pure white. Both this and

A. citratum are natives of Madagascar. The flowers of the latter are small, creamy white, with pale green spurs, and about a dozen of these are produced in two rows upon the horizontal racemes.

A. Ellisi is a pretty, sweet-scented Orchid, named after the late Rev. W. Ellis, who first brought it to this country from Madagascar. The leaves are from 8 inches to 10 inches in length, and it bears long, arching racemes of pure white flowers.

A. falcatum is a dwarf plant, with narrow, deep green foliage. The flowers are small and produced on short racemes. Being a native of Japan, this kind thrives in a much lower temperature than the other species named.

A. fragrans is a very small-growing plant, producing single-flowered scapes, the blossoms being pure white, about 2 inches in width. The dried leaves of this Orchid are called Bourbon Tea by the natives, and are said to resemble vanilla in flavour and scent, and to be used as a digestive medicine.

A. Leonis (the species illustrated), a native of the Comoro Islands, was discovered by M. L. Humblot. It is a dwarf, but stiff-growing plant, the leaves about 7 inches long and deep green. The flowers are so well drawn as not to need description. This is also known as Aeranthes Leonis.

A. modestum is a beautiful little Orchid with bright green, bronzy-tinted leaves each about 6 inches long. The flowers occur in two lines upon the arching scapes and are pure white. It produces its flowers with the greatest freedom.

A. Scottianum is very distinct and a totally different habited kind. The leaves are terete, 3 inches or 4 inches in length, and produced from a long rooting stem. The flowers, appearing in pairs from the axils of the leaves in summer, are pure white. It is a native of the Comoro Islands, requiring abundance of heat and moisture and very little rooting space. R.

The Week's Work.

HARDY FRUITS.

Planting Strawberries.—The planting season is now at hand, and my remarks apply to the importance of doing the work as early as possible to secure a strong autumn growth. There are several advantages in early planting on well-prepared ground; the plants grow so freely, and after the genial rains recently, with the earth so warm, the conditions are most favourable. Those who plant early reap a great advantage, as the plants are better able to stand severe frost or drought, and the flower-spikes are thrown up more strongly. There should now be no delay in planting and no stint in the way of food, allowing the soil to settle before doing the work. It frequently happens that land for this crop can be got ready ere this. Ground which has been cleared of early Potatoes, Turnips, Spinach, or similar crops answers well. Much can be done to make poor land suitable by adding heavy soil, marl, or clay if expense is no object, but as in most gardens labour is none too plentiful, the grower by deep cultivation, giving plenty of food, and not allowing the plants to get old or weakened will reap a good return. Firm planting is essential, and in poor land, though deep cultivation is advised, it is not well to bury the good soil. This should be kept on the surface, the manure being placed in layers under it, the bottom soil well broken up with a strong fork and the manure mixed with the middle spit or second course.

Preserving Strawberries.—If fruits for cooking or preserving are required and of small sorts, yearly planting may not be necessary, indeed, some kinds for the above purpose are best left for two years; but as far as my experience goes it is not well to leave them after having borne three crops. Such varieties as King of the Earlies, Grove-end Scarlet, Black Prince, and some of the Pine section are valuable for the above purpose. The plants should now be cleared of the runners not required, and the old foliage may be reduced, the rows well cleaned by hoeing, and a top-dressing of farmyard manure given. This will encourage the formation of strong crowns and large fruit spikes for next season. Where liquid manure is plentiful it may be given freely. The manure placed between the rows should be lightly forked in. It is well to place a line up each side of the plants and cut away a certain amount of top growth, giving room for the manure.

Autumn fruiting Strawberries.—The plants grown for this purpose should now be allowed to throw up their flower-spikes, which they will do freely if well fed, and the copious rains in most parts of the country will strengthen the flower-spikes and cause the fruit to swell freely. Up to this date vigorous pinching has been necessary to get late autumn fruits, but it is not wise to delay the fruiting longer unless more spikes appear than the plants can mature, when early removal will be beneficial. The season of growth now being so short every means must be taken to forward the crops, and the best food will be liquid manure. The hoe should be plied freely between the rows to keep down weeds, and in heavy soils it is well to place the fruit on slates or tiles, slugs being troublesome. All summer growths must be cut off, and in wet weather should there be too much leafage, some may well be removed to admit the sun.

Raspberries after fruiting.—The old fruiting canes should not be allowed to remain a day after the fruits are cleared if the welfare of the plants is considered, as these with the fruit crop will have impoverished the plants, and much harm follows when the plants are allowed to make new wood and support the old. Raspberries being surface-rooters will now well repay food in the way of a mulch, and the more decayed the manure the better. Previous to mulching, all useless shoots or sucker growths should be pulled out, and any varieties which appear worn out and are only making a weak growth should be destroyed. The land should be trenched and a new quarter selected for a fresh plantation.

Figs on walls.—Many trees, no matter how well established, were cut down to the ground level last winter, and, of course, fruit this season will be out of the question. Much, however, may be done towards ripening the wood for next season's crop. Growth in the spring being late owing to the protracted frost, I advised more attention being paid to the new growths from the base, and as much of the old wood or top growth was killed early removal down to a live portion will have facilitated the new growth, as if the new shoots were thinned early, only leaving the strongest, these latter will have made good progress and should now be fastened to the wall to get firm and matured. Avoid crowding the new wood, as if at all soft it will not winter well. Feed freely with liquid manure to encourage strong, rapid growth, and if necessary give a good mulch of decayed manure. Old trees require more moisture than usual this season; having a mass of roots, they will, with less strong wood, send up a lot of thin growths, which must be reduced in number.

Cherries—Morellos.—The fruit will now be at the finishing stage, and the trees if cropping freely well repay a rich mulch, and plenty of moisture to keep the growths clean and prevent the fruit shrivelling. The Morello does not crack when ripe like the sweeter kinds, and requires much moisture in light land. The trees if they receive a check are apt to go off wholesale; the leaves droop and turn yellow prematurely, and next season the tree, or a large portion of it, collapses entirely. The wood should be laid in neatly, using as few nails as possible. Foreright shoots may be cut back hard, only leaving a few eyes or buds. These will then make good fruiting spurs next season. Should black fly be troublesome, dust some tobacco powder on the affected parts, and, for trees badly infested, syringe over early in the day, so as to get dry by sunset, and apply the powder whilst the shoots are damp. Endeavour to lay wood in freely, as the more new wood that can be laid in, the greater is the freedom from canker.

Small fruits, such as Gooseberries on north walls, required for hanging, must have the sucker growths cut away, also any lateral or spur growth not required for extension, and, to prevent shrivelling, sufficient moisture to keep the trees free of red spider. Protection must also be afforded by netting or thin tiffany. The latter prevents the fruit being scorched, and also prevents mice or

small birds injuring the fruit. Trees in the open that have borne a heavy crop well repay supplies of food in the way of liquid manure. Any useless growth on bush fruits may with advantage be cut away, as by so doing the trees get more light, and rains reach the roots more readily. Young trees of Gooseberries or Currants planted rather thickly in lines may be mulched with some good manure.

G. WYTHES.

KITCHEN GARDEN.

EARLIEST CELERY. — In some few places Celery is expected by the middle of September, and where Sandringham or any of the early white kinds has been liberally treated since the removal to the trenches in April, a partial earthing may now be given. The first thing necessary is to give the trenches a thorough soaking with farmyard liquid a couple or three days before earthing is commenced, then remove all suckers which may have issued from the base of the plants, also a few of the lowermost leaves. If one man only has to do the work, each plant should be firmly tied together a few inches from the bottom, in order to prevent the soil from getting into the centres. When two men are employed one should walk backwards, grasping the plant firmly with both hands, while the second, walking in the reverse manner, brings up a little soil, pressing it firmly. A small portion should then be taken off the sides of the trench with the spade to give it a level and neat appearance. If any traces of Celery maggot appear, hand-picking must be resorted to before earthing up. Except where this very early demand for table Celery is made, there is no gain in commencing earthing up so soon in the year.

COLEWORTS—SECOND SOWING.—A second sowing of this most useful vegetable should now be made, the first batch, which is now growing freely, needing a liberal thinning. Do not neglect this until the young plants through weakness fall about. Encourage the earliest lot by liberal waterings at eventide, so that they will be ready for transplanting as soon as old Strawberry beds are cleared away. My best Coleworts are always produced on such sites, the firm, undisturbed root-run promoting a stocky growth and good, firm white hearts. Plant 15 inches apart all ways, and in dull or showery weather if possible. Watch carefully for underground grubs, these often destroying many of the best plants by cutting them off just beneath the surface. If searched for early in the morning they will generally be found upon the spot. Net the second sowing without fail and keep moist until the plants appear.

OPEN-AIR TOMATOES.—The earliest lot of these having now been planted some time will need attention in the matter of securing the leads either to the wires, where the walls are furnished with such, or to stout slanting stakes fixed firmly in the ground. Remove all side laterals as they appear, and in the case of those plants that are plunged in the pots and are showing surface roots, top dress moderately, postponing the heavier mulch and liberal feeding until the first lot of fruit is set. With free cropping varieties it is not wise to allow every fruit in all the clusters to remain, all deformed or secondary ones being removed so that the first set and more symmetrical portion may swell to their normal size. All screens of evergreens, boards or lights may now be entirely removed. Avoid cutting away the foliage wholesale in order to hasten maturity, as this is a positive loss and tends to weaken the plant and lessen the aggregate weight of the crop. Be satisfied with a moderate growth in successional batches, withholding all stimulants for the present. It is not yet too late to plant out later raised batches of good open-air varieties, as with a fine autumn an abundant crop may set, which if not ripening on the outside wall may be cut with a portion of wood attached and suspended in a warm dry vinery or greenhouse, where they will ripen sufficiently for cooking or making sauce. This later batch will do best if not turned out of the pots, but plunged as recommended for the first early lot, being mulched and fed similarly after the fruit is set. Laxton's Open Air is hard to beat, all points considered.

TURNIPS.—Another and final summer sowing should now be made, choosing a cool moist position as recommended for the last two sowings. This will carry on the supply until the August sowings of Orange Jelly and Chirk Castle are made. Should the bulbs attain to their normal size sooner than expected and any fear of a blank occurring exist, they may be lifted and laid in carefully in a cool, shady corner. If this is done in time it is surprising how long they will remain in a usable condition. Turnips now at the thinning stage must get liberal treatment, or grub and hollow or decayed centres may be expected. Give manure water several times and a good bath overhead occasionally in the evenings of sunny days. Thin out well so as to allow of a free circulation of air.

CABBAGE QUARTERS.—Some time ago I advised going over the first beds of spring Cabbage and cutting back all the main stems to within a few inches of their base in order to encourage the formation of a colony of tender sprouts at the right date. If this cutting back is not practised, the sprouts come early and at a date when plenty of other vegetables abounds, being in consequence little valued in the kitchen. Secondary lots which have been cut over may now be treated in the same way if the ground can be spared. These will be found invaluable where Coleworts are not grown. Let the ground between the crops be hoed and cleared, and a good sprinkling of artificial manure given should showery weather set in; this will greatly assist the old half-exhausted stems to put forth new vigour.

RAGGED JACK KALE.—If a sowing of this hardy and useful green was made when advised, any blank space caused by lifting Potatoes or clearing off Broad Beans and Peas may with advantage be filled with the young plants. This may seem late for such work, but if the ground is in fair heart the plants will make a hard wiry growth and be able to withstand almost any frost, and making renewed growth in spring will afford many dishes and an agreeable change in the dining room. All late-planted Broccoli, Kales and Brussels Sprouts should now be hoed for the last time, and advantage taken of the dry weather to use the same tool amongst all crops again. Sometimes at this particular date a colony of Nettles springs up on Celery ridges; these need timely removal by the hand, using an old glove. Hoeing frequently forces a lot of soil down into the trenches when the weeds are close to the sides.

HARVESTING ONIONS.—In all forward districts the earliest autumn-sown Onions will be fit for pulling up. Allow them to remain on the ground for ten days or so, turning them about occasionally to expose each part of the bulb to an equal share of sun and wind, afterwards removing them to a cool dry place and spreading them out thinly. Shallots unharvested should also be got under cover, as heavy rains sometimes cause the bulbs to start into a second growth, which is an evil. As soon as Garlic ceases to grow it should also be treated in the same manner. J. CRAWFORD.

STOVE AND GREENHOUSE.

CANNAS AT CHISWICK.

THE large-flowered Cannas have grown so rapidly in popular estimation within the past few years and the increase of kinds has been so great that it became impossible for private growers to try them all. The trial at Chiswick will consequently be of great assistance in enabling one to select the finest and most distinct varieties, as it must be admitted that there is a great similarity in many of them. The collection on trial fills the two divisions of the Paxton house, and an early opportunity should be taken of inspecting it, as the plants are now flowering well. The varieties here named and described are a choice selection of the very best, representative of the several types and colours found in the family. Among the spotted varieties—of which many are not wanted—the finest are Antoine Barton and L. E. Bally, both having good spikes of large, rich yellow flowers, profusely spotted with bright crimson. Mme. Crozy, now fairly well known, is still a prominent variety, and brilliant in effect with its scarlet yellow-edged flowers. President Carnot is a dark-leaved variety, its flowers of a bright self-crimson colour, and Alphonse Bouvier is a striking kind with a long truss of rich self-crimson flowers, fine individually and of telling effect in the truss. J. D. Cabos is one of the most distinct varieties, its stout stems nearly 6 feet in height, clothed with dark purple leaves, and crowned with large erect heads of bloom, the flowers of a bright and most attractive shade of orange-buff without spots or stripes of any other colour. Capucine is somewhat similar in colour to the preceding variety, but much more dwarf in habit, making a robust compact plant with long light green leaves of a decided glaucous tint. Gloire de Empel has dark leaves and extra fine flowers of a crimson hue, and Felix Crousse is distinct, with a free habit and bold truss, the flowers deep crimson, the petals longer and narrower than those of most kinds. Sophie Buchner is an effective variety of strong free growth, its shoots crowned with a noble truss of bright scarlet-crimson flowers that are large and unusually broad in the petal. P. Marguant has pretty flowers of a clear orange-buff flushed with red, a distinct and attractive shade of colour. There are a great many more varieties to be seen, but the cream of the collection is embraced in those here described.

Arum Lilies.—Where planting out is practised to secure a batch of strong plants, now is a good time to pot them up, so as to avoid the leaves flagging, as they do when potting is deferred until the last week in September. This dry season has not been favourable for an early growth of the plants. By potting up the roots in good time, and giving them a sunny position afterwards, the lost time may yet be made up. —E. M.

New Malmaison Carnations.—I am so far very pleased with the growth in pots of the new Malmaison Carnations raised by Mr. Martin Smith and distributed by Mr. Douglas. They seem to possess all the vigour of the old Souvenir de la Malmaison, Mrs. Everard Hambro', Sir Charles Freemantle and Sir Evelyn Wood being particularly free in growth. While many of the new border and Tree Carnations are of comparatively poor growth, it is pleasing to find these Malmaisons the reverse, as the fine size and colour of the flowers cannot but secure for them great popularity amongst all lovers of Carnations.—J. C.

Phyllocactus crenatus. — This beautiful flower should be grown by all. The cottager with his window may command equal success with the millionaire and his acre of glass. The blossoms are large, sweetly scented, and on the inside of a creamy whiteness, which on the exterior petals changes to a darker shade. The flowers are not very lasting, but their loveliness makes amends for their fugitive qualities. Pot in good fibrous loam mixed with lime rubbish and broken potsherds, making the soil as firm as possible. The plant will want no water from November till March, when it will begin to start into growth again. Cuttings should be dried for two or three days before inserting them in the soil.—S. W. F.

Layering Malmaison Carnations.—Those who have healthy plants of this popular Carnation will be anxious to increase their stock as soon as the new growths become sufficiently consolidated. In this midland district the old-fashioned plan of turning the old plants into open borders and layering does not answer very well, rooting being very slow and generally unsatisfactory. The plan I adopt is to stand the parent plants on the north side of a span-roofed green-

house, where they are shaded by the foliage of Azaleas and Camellias, sufficient sun and light, however, gaining admission to prevent them becoming drawn and weakly. I then select the most promising shoots, making an incision from one joint to another in the ordinary way. A little Sphagnum Moss is then gently wedged in to keep the incision from closing, and the whole bound round with Sphagnum Moss. The Moss is syringed daily to keep it moist, and in due time the young rootlets may be seen protruding through the bandage in all directions. The layers are then taken off and potted, Moss and all.—J. C.

Scutellaria Mocciniana.—A great many members of the genus Scutellaria are hardy, but the above-named species—Mocciniana—requires the temperature of a stove, or at all events of an intermediate house, though during the summer months it succeeds perfectly in the greenhouse, and, blooming as it does at this season, the flowers remain fresh and bright for a longer period than they would in a warmer structure. This Scutellaria is a native of Mexico, from whence it was introduced over a quarter of a century ago, and at one time it was met with far more frequently than it is at the present day. The flowers, which are borne in closely packed terminal clusters, are tubular in shape and about 1½ inches long, their colour being bright scarlet, with the interior of the bloom yellow. Such a large quantity of blossoms is borne in one cluster, that a succession is kept up for a considerable time. It is easily propagated by cuttings of the young growing shoots put in early in the spring, and kept rather close till rooted, which will not be long. They must not be kept in the propagating case longer than is absolutely necessary, for the plant has a tendency to run up thin and naked during its earlier stages; hence as sturdy a growth as possible should be encouraged, and the plants when young must be stopped in order to ensure a bushy habit. At the same time this must not be carried to excess, for the stouter the stems, the finer the heads of blossoms.—H. P.

Two forms of Thunbergia grandiflora.—The two distinct forms of this Thunbergia, that is to say, the ordinary kind with pale blue flowers and the little-known variety with white blossoms, are just now flowering freely in the Victoria Regia house at Kew, and show well their value for such a purpose. In houses such as this there is ample space to allow the climbers to dispose themselves to a great extent as they will, and it is in this way that subjects like this Thunbergia are seen at their best. The two varieties above mentioned form the subject of a coloured plate in The Garden of March 2 of the present year.—H. P.

Littonia modesta.—This is a native of the Natal district of South Africa, and consequently in this country it needs greenhouse treatment, though at one time it was frequently met with in the stove, where the results were often unsatisfactory. The Littonia in question is a near ally of the beautiful Gloriosa superba, and is a slender-growing climbing plant, attaching itself to any support within reach by long tendrils, which are produced at the ends of the leaves. Both produce curiously shaped tubers, which pass the winter in a dormant state, and in the case of the Littonia, slender succulent shoots are pushed up on the return of spring. These shoots soon lengthen and quickly acquire a climbing habit, but they do not attain the length of those of the Gloriosa. The flowers of the Littonia, which are produced from the axils, are bell-shaped, drooping, and about a couple of inches across. Their colour is bright orange, which is but little represented among greenhouse climbers, and a succession is kept up for a considerable time. Soon after the flowers are exhausted the stems show signs of going to rest, the first indication of which is the leaves turning yellow, and when this takes place the supply of water must be gradually diminished, and finally almost entirely withheld during the winter. Then on the return of spring the tubers should be shaken clear of the old soil and repotted, when they will quickly push up shoots. Care should be taken that these tender succulent shoots are not injured in any way, as if the growing portion is broken, there will be no flowers from that particular shoot, as it will not break out into growth again, being in fact but a flower-spike.—T.

CHLOROPHYTUM ELATUM VARIEGATUM.

This plant, I believe, was originally sent out in 1874 or 1875 under the name of Anthericum variegatum. At any rate in the latter year I had two nice plants of it, which in time were transferred to 8-inch pots, and therein made good showy plants, the retail price for these extra-sized plants being one guinea each. As a decorative plant it was as a novelty advertised to supersede Pandanus Veitchi, but this was never realised. It was also stated to be hardy, a circumstance which resulted in the loss of many plants a year or two later. Indeed, the plant is not sufficiently hardy in some districts to safely pass through our more severe winters even when given frame protection. As a rule, the plant is more generally employed in the cool conservatory or winter garden, and in the latter it is capable of producing a good effect by reason of its well-marked foliage. In many a competitive group, too, in the exhibition tent it may frequently be seen playing its part, either as a raised isolated example or among the lower plants constituting the margin. In all such arrangements, however, the best effect is secured when the plant is slightly lifted up, by reason of the long graceful leaves reaching below the pot containing it. These are some of the uses to which it may be put, but in none of them do we see so much of the natural beauty of the plant as when it is allowed to go its own way.

Quite recently I saw an excellent example of this growing as a window plant in a 9-inch pot. The plant was well furnished and had produced several flowering stems, but these latter not having been removed were fully 3 feet high. Curiously enough, these old flower-stems contributed to the chief attraction of the plant under notice, as from many of the axils on the stem leaf-buds had issued and formed nice young plants. These latter, to the extent of a dozen or more, were thus suspended from the somewhat branching stems in all directions, and in this condition it was certainly one of the most attractive window plants I have seen. I have occasionally seen similar growths on the flower-stems of Anthericum Liliago, and more rarely on A. ramosum, but not to the same extent as on the plant above noted. Those of your readers who may be in search of a novel and interesting window plant of easy culture could scarcely do better than grow this one, encouraging the plant to flower freely, which it does when established, afterwards leaving it to its own devices. The specimen here noticed was filling quite a large window, and as a variegated plant for this purpose was quite unique. E. J.

Dipladenia atropurpurea.—With the various collectors throughout the world on the watch for new plants it is strange that this Dipladenia which was lost soon after its introduction in 1842 should have remained unknown to cultivators till it was re-introduced by Mr. Stephenson Clarke, of Croydon, in 1889, and then it cropped up quite accidentally among some imported Cattleyas. It is undoubtedly a great acquisition to stove flowering shrubs, for it will bloom profusely when grown as a little bush, even plants in pots only 5 inches in diameter producing a great number of blossoms. The individual blooms are about 3 inches long and a couple of inches or so across the mouth, their colour being a kind of chocolate-crimson overspread with a velvety lustre, the inside of the throat orange at the base. The outside of the flower is crimson-purple at the lobes, fading gradually off to the base, where it is almost white. It is one of the most continuous-flowering Dipladenias that we have, for even small plants will bloom nearly all the summer. The lover of huge blossoms will doubtless see more to admire in some of the large-flowered hybrids, but most people would, I think, be inclined to place this species and the white-flowered D. boliviensis among the very best of the Dipladenias. They are certainly far less particular as to their cultural requirements than many of the hybrid kinds. Both strike readily from cuttings and soon form effective-sized plants. D. boliviensis, which was first sent out by Messrs. Veitch in 1870, has flowers rather larger than D. atropurpurea, their colour being white with an orange centre. These two species therefore form a direct contrast to each other.—H. P.

Hæmanthus Katherinæ.—Some species of Hæmanthus, notably the brightly coloured H. multiflorus, often grown under the name of H. Kalbreyeri, are not very amenable to general cultivation, while, on the other hand, several of them can be grown with very little trouble and depended upon to flower well. One that ranks high as a good garden plant is H. Katherinæ, with large heads of bright cinnabar-red blossoms that last a long time in perfection if they are not kept in too hot and close an atmosphere. It succeeds well in a cool stove or intermediate house temperature, but I have also seen good examples where it has been treated as a greenhouse plant. It has been in flower here for the last month, and forms a very pleasing change from the plants usually grown. A second species that has flowered this year with unusual freedom is H. albiflos, whose closely-packed heads of white blossoms are borne on stems about 6 inches high. This is very effective when grown in a large pan, as they grow H. coccineus at Kew, for the numerous flower-heads form a very effective specimen. In an importation of H. albiflos I have seen very variable leaves, some being nearly smooth and others clothed with whitish hairs. In some of these last the hairs were especially noticeable at the margins of the leaves. H. albiflos blooms best when thoroughly established.—H. P.

HIBISCUS ROSA-SINENSIS.

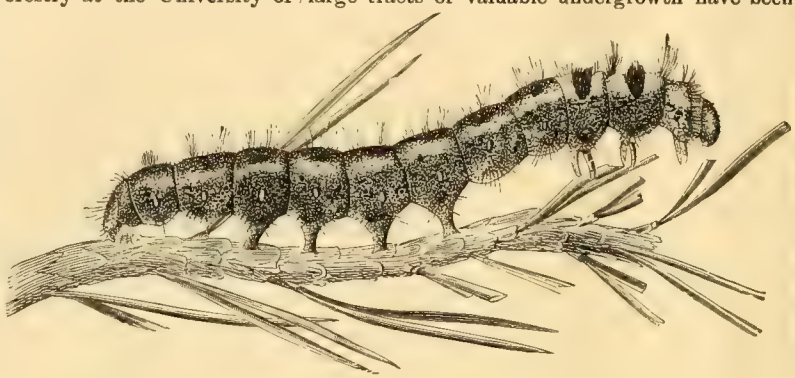
This, which is known as the Chinese Rose, is regarded as a native of China, but it has been for such a long time cultivated in many parts of the tropics, that it now often occurs in a wild state, and forms a brilliant feature in tropical scenery. It is essentially a stove or at least an intermediate house plant, though during the summer it may be kept in a warm greenhouse. I have met with it in several instances tried out of doors this summer, and in most cases it is flowering freely, though in some places the foliage is not in so good a condition as it might be. At Battersea Park I noted a bed of a single brightly coloured form that yielded a considerable number of its brilliantly tinted blossoms. The different forms of this Hibiscus give the finest display when they are planted out in a sunny stove, as they will then flower in the greatest profusion. They strike readily from cuttings, and under liberal treatment will grow rapidly. The typical H. Rosa-sinensis was introduced into this country as long ago as 1731, but though some very beautiful varieties have made their appearance within the last half century, it is at the present day to a great extent under a cloud. There are many varieties in cultivation, some with single and others with double blossoms, while one—Cooperi—was about a quarter of a century ago very popular as a fine-foliaged plant. The leaves of this are broadly lance-shaped, bright green, irregularly marked with white and crimson. A well-coloured bush of this is very effective. The flowers of this variety are scarlet. No mention of the different forms of H. Rosa-sinensis would be complete without a word or two in praise of H. schizopetalus, which, though usually spoken of as a distinct species, is at all events nearly related to the old Chinese Rose. It certainly does not possess the large gorgeously coloured blossoms of this last, but it is so distinct from anything else as to be sure to attract a large share of attention when in flower. This Hibiscus is of a loose open habit of growth, and, like its allies, will not bloom freely if kept dwarf. As a roof plant it is seen to

very great advantage, for the pendulous blossoms are borne on stalks 6 inches or more in length, and consequently the flowers are brought immediately under the eye. The individual blooms are about 3 inches in diameter, and remarkable for the curiously cut and slashed petals, which are of a bright red colour, marked towards the centre with yellow. As in many of its relatives, the long projecting stigma forms a prominent feature. T.

Books.

DR. SCHLICH'S MANUAL OF FORESTRY.*

The present volume is an English adaptation of the well-known "Forstschutz" of Dr. Richard Hess, Professor of Forestry at the University of Giessen. The adapter found it necessary at times to deviate from the original, especially in the chapters on Forest Offences and Rights and Forest Insects, so as to make them more serviceable for English students, and where practicable his examples have been taken from Britain and India. The present volume stands as No. 4 of Dr. Schlich's admirable "Manual of Forestry," leaving only vol. v., on "Forest Utilisation," to complete the series. The adapter gratefully acknowledges the assistance he received from Professor Schlich during the progress of the work, and also from Mr. B. H. Baden-Powell, C.I.E., instructor in forest law at the Royal Indian Engineering College, and late judge of the Chief Court of the Punjaub, who undertook the revision of the chapters on Forest Offences and Rights.



Gastropacha pini. Mature caterpillar feeding on the needles of a Pine shoot.

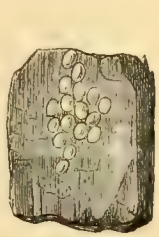
Up to comparatively recent times forests were looked upon as the hunting grounds of the great, and little was done in the direction of forest protection beyond what was necessary for securing sufficient tracts of forest for the protection of deer and other game. The barbarous forest laws of ancient times were directed against the unfortunate peasants, whose fields were ravaged by the four-footed lords of the forest unchecked save for the quasi-paternal war levied against them by the feudal lord. The Ban forests of Germany and the forests of Epping, Dean, Windsor, and the New Forest remain as relics of former extensive tracts reserved as hunting-grounds by royal and noble personages. William the Conqueror, who "loved the tall deer as a father," and the other Plantagenet and Tudor kings, whose principal relaxation was in the chase, and whose sanguinary laws against deer-stealing and minor forest offences were a disgrace even to those times, knew nothing of forest preservation in the broader sense; and in England the first example of a monarch who considered forest trees of more importance than game is to be found in James I. This monarch drew upon himself much unpopularity by enclosing part of Windsor Forest and putting an end to the pollarding of maiden Oak trees, which were lopped in winter to enable the deer to browse off the bark of the lopped branches. None but pollard Oaks have been lopped in this way since 1608, and most of the hollow Oak pollards in Windsor Forest were in existence before that date. The rabbit pest is very badly felt in this royal forest, where they have increased in an alarming manner during the last twenty years, and where large tracts of valuable undergrowth have been destroyed by them. "Such wholesale destruction," the author observes, "of valuable woods by rabbits would not be allowed in any other European forest." Another cause of forest deterioration was the grazing of pigs and cattle. In old days this was a forest usage second in importance only to that of hunting. In Germany, forest grazing was regulated in 1585 by the Ordinance of Mansfeld, which prescribed a five years' close season for all coppice woods with twelve years' rotation. In 1665 Louis XIV. put an end to the grazing of sheep and goats in the French Crown forests. The custom of grazing pigs in Oak forests has greatly fallen off in importance of late years. The great damage done to forests by insects first attracted attention in Germany in 1780, and since that date important works have been published on forest entomology. Early in 1800 laws were passed in France and Germany for the fixing of shifting sands in the neighbourhood of forests in littoral districts, and to the engineer Brémontier belongs the credit of having been the first to devise a remedy for this cause of forest decay. In 1856 the great damage done by floods in the Rhone valley induced the French to pass a law for the *reboisement des montagnes*. Forest fires, once of frequent occurrence in France and Germany, are now effectively guarded against in those countries. The preservation of birds useful in forestry and agriculture is now the subject of special enactments, but, as the author points out, a serious danger lies in the indiscriminate slaughter by gamekeepers of birds of prey and the smaller carnivora, owing to which thoughtless destruction rabbits and wood-pigeons have increased so enormously, as to become "a veritable scourge to forestry and agriculture, to say nothing of even greater danger from mice and voles."



Cocoon of Gastropacha pini.

Lastly, there are the many diseases of forest trees, which researches of comparatively recent date have traced to the operation of fungi.

The book is divided into six parts, of which part 1, dealing with the protection of forests against man, contains chapters on forest boundaries, protection against irregularities in utilising forest produce, offences and protection against forest rights. Part 2 deals with the protection of the forest against game, rodents, birds, insects, with a chapter on insects useful to forests,



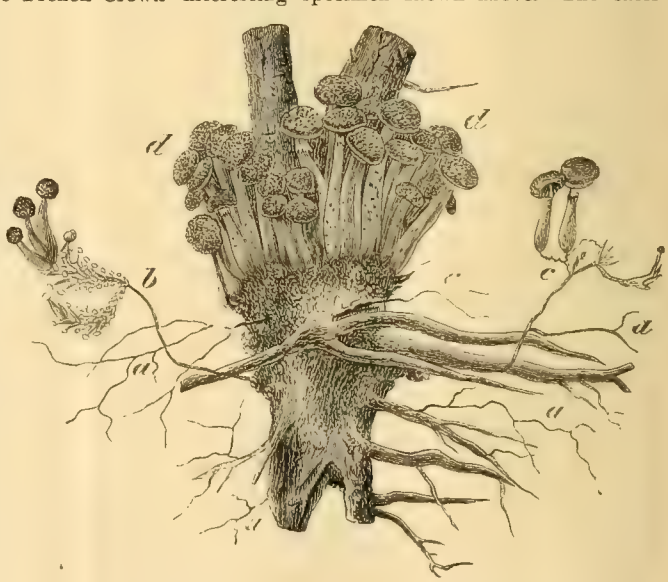
Eggs of Gastropacha pini on Pine bark.



Pupa of Gastropacha pini.

and also special chapters on injurious forest insects (Coleoptera and Lepidoptera). Part 3.—Protection against plants, forest weeds, fungi. Part 4.—Protection against atmospheric influences—frost, isolation, wind, violent rain, hail, snow and rime. Part 5.—Protection against non-atmospheric phenomena—damage by water, avalanches, shifting sand, forest fires. Part 6.—Protection against certain diseases—red rot, white rot, stag-headedness, abnormal needle-shedding, damage by acid fumes from furnaces.

The accompanying illustrations are taken from the chapter on the Pine moth, page 267. This moth (as the editor observes in a note) is fortunately not a native of these isles, but it has played in the history of European forestry a part which entitles it to the bad eminence accorded to it in the present work. A brown moth, 60 mm. to 80 mm. across the outspread wings, with peculiar markings in the wings varying much in individual examples, owes its existence to the interesting specimen shown above. The caterpillar attains a length of 80 mm., has sixteen legs, and in colour varies from ash-grey to red-brown or dark brown, with peculiar markings. The moth makes its appearance in the months of July and August, and about 100 to 200 bluish grey eggs, as large as hempseed, in clusters of about twenty-five to fifty, are deposited by it in the bark



Eight-year-old Scotch Pine killed by Agaricus melleus. (Reduced.)

* Dr. Schlich's "Manual of Forestry." Vol. iv.—Forest Protection. By W. R. Fisher, B.A., with 259 illustrations. Bradbury, Agnew and Co. (Lim.), Bouverie Street.

crevices of Scotch Pines standing at about the height of a man, or on the needles and shoots of young Pines. In from twenty to twenty-five days the caterpillars appear, and scatter themselves about the twigs where they begin to feed. In October they hibernate in Moss, dead leaves, &c., at the foot of the trunks, and in the following March and April, if the weather is warm enough, they recommence their work of destruction. Pupation takes place in June or the beginning of July, and the moth emerges about twenty days after.

It is a most voracious little beast and the most destructive of all insects to the Scotch Pine forests in Central Europe. It also attacks the Austrian and Mountain Pines, and, if food is scarce, Spruce and Larch too. The attack is on the needles. A single specimen will eat a needle in five minutes and may destroy 1000 needles, and the result of the destruction of the needles and buds is that the tree perishes. The trees may recover, however, if, for a pole, 200 needles and, for an old tree, 400 needles remain green. An attack generally lasts for three, occasionally for four years, until from degeneracy, insect parasites, and bacterial diseases the enemy itself succumbs. Various are the measures taken to get rid of the pest. These include the making of trenches in the ground to catch the caterpillars, collecting the eggs by scraping them from the trees—a method which has the drawback of destroying many ichneumons, collecting the caterpillars after November or by shaking the trees in August, collecting the pupæ in July and August, collecting the female moths in July in the mornings and on cold wet days before the eggs are laid, by which means the ichneumons are not destroyed; but the best and safest plan where the insects have appeared in large numbers is girdling the trees with grease or tar bands. This method was first employed in Silesia in 1829 against that scourge, the Liparis monacha. In 1878, in Plietnitz, W. Prussia, 45,000,000 caterpillars were destroyed by means of tar rings at a cost of 7s. per 10,000 caterpillars. In woods under sixty years old the hibernating caterpillars were collected at a cost of 20s. per 10,000. The value of the annual increment of wood saved was 8s. per acre, as against 7s. the cost of the tar rings. The caterpillars, finding their ascent to the tree crowns cut off, return to the ground and try to find their way to other trees; this, however, they are prevented from doing by isolating, by means of trenches, the wood containing the tarred trees from other woods which have not been so protected.

Our second illustration represents the honey fungus (Agaricus melleus, L.), one of the commonest in these islands, and the cause of a disease frequently met in conifers. In the accompanying fig. it is seen upon an eight-year-old Scotch Pine, which it has killed. A full description of the symptoms is given at p. 382. Plants which have been attacked eventually die, and when young, generally in the first year of the disease. On examining the dead plant with a microscope the bast and cambium will be found to be destroyed, and the resin-ducts full of hyphæ, and enlarged and deprived of resin; fine hyphæ also proceed along medullary rays towards the centre of the tree. Starch is transformed into turpentine, which flows from the tree. The fungus attacks all indigenous or exotic conifers, especially the Scotch and Weymouth Pines and the Spruce; the Larch not infrequently, but rarely the black Pine. There is scarcely any limit to the great age at which the tree may be attacked, but the disease is most frequently seen in plants between four and fifteen years old. In dense sowings and multiple plantings the disease is at its worst, especially if the wood was originally stocked with broad-leaved trees, as Beech, Oak, Hornbeam, Birch, and species of Pyrus and Prunus. Left in the ground, the stumps of such trees form the nurseries which propagate the disease. Plants which have been attacked are seldom recognisable as such until the year before they succumb, when their needles turn pale and their shoots are stunted.

The following protective measures are recommended:—

(1) All stumps and roots of broad-leaved trees should be thoroughly extracted before plantations of conifers are established on the site of a broad-leaved wood, and where the disease has once appeared, dense sowings of conifers and multiple planting should be avoided. When the disease shows itself—

(2) All plants which are attacked must be dug up with all their roots and the rhizomorphs and burned. Should this produce a blank, the ground must be thoroughly trenched and all strands of rhizomorphs extracted before it is replanted, and it is best to plant broad-leaved species.

(3) Small isolation trenches should be dug round plants, or groups of plants, which have been attacked, so as to localise the injury and prevent a further spread of the rhizomorphs. The trenches should be far enough from the plants attacked to exclude all rhizomorphs from the healthy trees.

Garden Flowers and Plants.*—This little manual is another addition to the series of cheap popular books of which Mr. Wright is the author, and, like those that have preceded it, it contains much trustworthy advice. The book is mainly intended to supplement the instruction that has been given by horticultural lectures under the auspices of the different county councils. It will certainly succeed in this. We note with satisfaction that in his general remarks the author advises simplicity of design and arrangement for the garden borders and beds, always accepting the situation as a guiding factor. A long chapter is devoted to annuals, and if the instructions are followed, the many lovely flowers of this tribe will have a chance to display their true beauty. Bulbous and tuberous-rooted plants form another division, the characteristics and cultural details of these being given, but we regret to see such vulgarisms as the word "bulbarian" (p. 63), which is a disfigurement to the pages of even a cheap book. Bedding plants have a chapter devoted to them, and another follows on the best hardy plants, containing also admirably selected lists of plants for flowering at different periods. We are glad to see these, because in them is the source of true flower beauty for small gardens, as those know well who have seen much of country cottage gardens, always brightest and sweetest when filled with hardy flowers alone. Florists' flowers are the subject of another division, where we regret to see the absurd distinction kept up between Pansies and Violas, and which, apart from its absurdity, will in a book of this kind tend to obscure the merits of the best type of garden Pansy. The book consists of about 140 pages, has a good index, and about fifty simple illustrations of much value, if lacking artistic merit.

Orchard and Fruit Garden.

ROOT-PRUNING.

While highly satisfactory results sometimes attend the judicious lifting and root-pruning of old or exhausted fruit trees, innumerable failures have to be recorded through the work being carried out in an unpractical manner. Frequently the excuse for rough and hurried root-pruning is that time cannot be spared for the work, but even where trees are numerous and labour scarce, the difficulty might be surmounted by extending the work over several years, attending first to those needing it most. The old-fashioned plan of digging a trench at a given distance from the bole of the tree, descending to the lowermost roots and severing with the spade great and small together, has had to give way to the more rational mode of lifting all roots worth preserving, shortening those of rampant growth and laying them in near the surface where they can feel the influences of sun and air. Under the old system good results were never obtained, some trees dying outright and others prone to rank growth after recovery from the shock, growing away as strong as ever by reason of the roots being still left down in the cold wet subsoil. Another great mistake often made is doing the whole of the roots at one time. This to an old deeply-rooted fruit tree often means death or permanent paralysis. When root-pruning is decided upon a sufficient quantity of fresh, sweet soil should be prepared some time beforehand, the same being laid in dry quarters till wanted. Any good loamy compost will answer well, provided plenty of opening material such as old mortar rubble or lime scraps be incorporated. The latter ingredient is imperative, as firm ramming must be practised when the new soil is placed over and amongst the roots. The end of October or beginning of November is a good time for lifting and root-pruning early varieties of Apples, Pears, Plums and Cherries, also Peaches and Nectarines, leaving later varieties until the third or even last week in the month. By disturbing only one half of the roots at a time, the remaining half supports the tree until new fibres are formed, and no serious check is given. When commencing the work the trench or opening should always be taken out at some distance from the tree, as the more of the fibrous portion of the roots that can be saved the better, and many of these are severed when a too close start is made. Young trees that have only been planted a year and which show a tendency to grow too strongly may be lifted bodily and replanted, but any that have stood untouched for several years and have much gross growth ought certainly to be treated in the piecemeal manner recommended for older trees. When this rule is violated, valuable young Pears and Apples are sometimes completely ruined. If the soil is wet and cold, owing to defective drainage, the latter should be rectified, placing a quantity of old brick ends, stones, or similar material in the bottom, and if possible replacing the old compost entirely with new. This need not necessarily be new turf, but a mixture of any fairly good soil, with plenty of rubble as a corrective. In very bad cases it is sometimes advisable to wash the roots previous to relaying them, and the portions of older strong roots that are allowed to remain may be notched at frequent intervals along their entire length to induce the formation of new fibres. Slates or tiles fixed firmly immediately beneath the seat of the tree are most useful in preventing tap roots from descending. It is these that are generally the cause of rank and unfruitful growth in all fruit trees. Mulching after the operation is necessary to protect against frost the newly-disturbed roots, which now lie near the surface and are easily injured by this agent, especially after heavy rains or snow. Rotten manure, however, should not be used, but light, loose material, such as rough leaf-mould. This will allow the moisture to pass away, and what little sun there is during winter to penetrate the border. When the trees operated on occupy warm walls, syringing is needful on fine days for a short time, or until the foliage falls. Some time ago I saw a lot of old fruit trees brought from a state of uselessness to a fruitful condition by the above mode of treatment.

J. Crawford.

Black Currants.—The crop of this fruit in the midland counties has been so heavy that poor

* "Garden Flowers and Plants." By J. Wright. Macmillan and Co.

prices only have been realised, good fruit having been sold for as little as 1s. 6d. and 2s. a stone. This fact clearly shows that a glut of any hardy fruit benefits none but the consumer, and that a medium crop, from a market point of view, is what is most to be desired. The greater portion of the Black Currant crop hereabouts is past, the fruit having ripened pretty early owing to the drought. In isolated places, and notably in one that has come under my notice, small plantations growing in semi-shaded positions are only just ripening their fruit. This would now realise a much better price, especially if the growers could dole them out to private customers, and thus evade the middleman. The same rule holds good with Raspberries, and it would doubtless pay fruit growers to turn their attention more to the question of aspect with these small fruits, in order to prolong the season and increase the profits.—J. C.

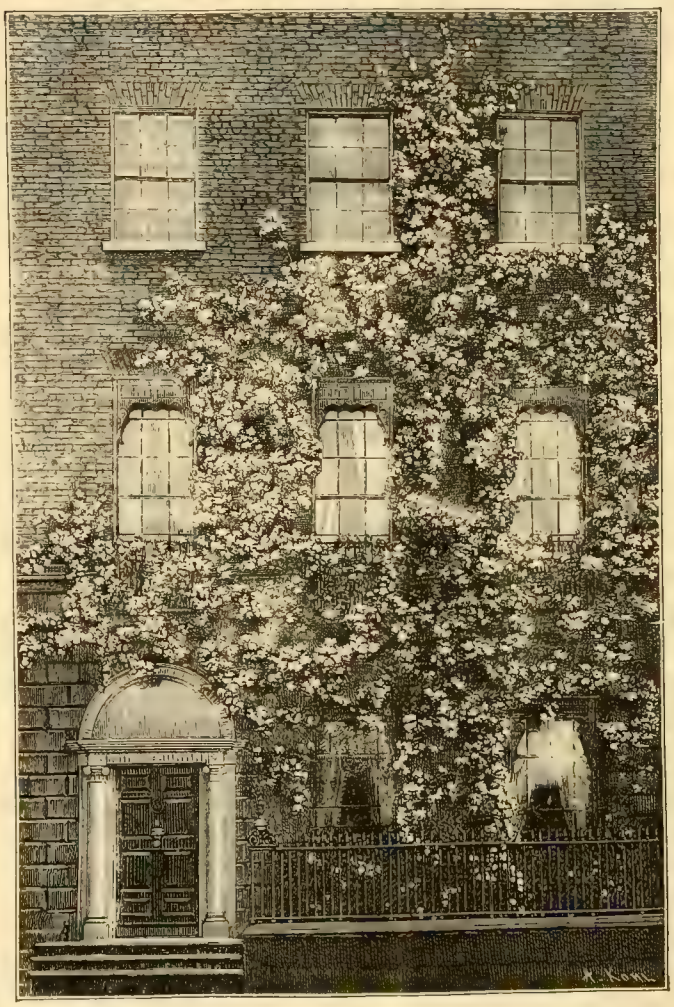
Leaves for dishing fruit.—Exhibitors of choice fruits are frequently annoyed at finding their Vine leaves, which looked right enough when leaving home, much withered and not at all suitable for adding grace to the various dishes. There are various substitutes, however, which, independent of their better keeping properties, are quite as ornamental when associated with Peaches or Nectarines, leaves of the Tulip Tree, larger Elm, and Hazel all doing good service in dishing up. Ampelopsis does very well if gathered late the previous evening, and if not wanted for more than one day. Of course, Vine leaves from cool structures, and especially the coloured leaves of some varieties in autumn, stand the ordeal of the show tent far better than from early forced houses, but, as a rule, the above-named subjects answer best. I have also seen leaves of the common Lime used, these, being somewhat hard in texture, lasting well.—J. C.

A JARGONELLE PEAR TREE.

Sir Philip Crampton was a celebrated surgeon in Dublin, and he resided at No. 14, Merrion Square. In his own profession he was a remarkable man, and amongst the medical men in Dublin to-day there are many traditions of him. There is also a public memorial fountain at the foot of College Street to his genius and worth as a citizen, but by far the most remarkable and beautiful memorial of him is the great Jargonelle Pear tree he planted in front of his town residence and surgery in the year 1815. The tree to-day is one of the features in the square, and the very car drivers point it out to visitors and strangers as a notable thing to see. The illustration is from a photograph by Werner and Son, and shows the tree as seen in its beauty of blossoming early in April last covered with bouquets of its exquisite white flowers. At the present moment every spur and branchlet are thickly set with fruit, and in all its long history this seems to be a record year so far as its fruitage is concerned. As a city fruit tree it is well worth notice, and it is to be hoped that some readers keen of observation as to the beauty and fertility of fruit trees in towns and cities will kindly send to the editor either good photographs or accounts of other noteworthy town fruit trees that may be known to them.

This historical town tree has repeatedly been alluded to in the pages of The Garden, but by far the best and clearest account is that in vol. iv. (p. 417) by the late Surgeon John Hamilton, who in part attributed its fertility and luxuriance to its fibrous roots having gained access to a sewer adjacent to its rooting area. In the year 1873 no less than 1700 Pears were gathered from the tree, but in more recent years this number has been exceeded, more than 2000 fruits having been gathered in an exceptional season. The tree has passed through various minor cultural vicissitudes. Thus some years ago a zealous and well-meaning attendant, hearing that paraffin oil was fatal to green-fly, and noticing these pests on its young growths, emptied a can of the oil from one of the upper windows, and the result was like that of a fire, the upper branches being dark and bare of leaves for a season or two afterwards. The present owner of the tree (Mrs. Hamilton) is most zealous as to its safe-keeping as a memorial of the past, and she certainly has her reward in now seeing it in a most healthy, fertile, and flourishing condition.

F. W. Burbidge.



Jargonelle Pear tree in bloom on Sir Philip Crampton's house, 14, Merrion Square, Dublin.

Cherry Governor Wood.—I note "S. W. M.'s" note in praise of this Cherry. It is also my favourite, outside or in. It is perhaps most at home and most fruitful on walls or fences, but it forms a good pyramid or bush, and I have also planted it as a cordon. But Cherries resent the narrow limits of cordons much more than Apples, Pears or Plums. Under glass or on walls or hoardings with any aspect, even north, side by side with the Morello, the Governor Wood retains the excellency of its flesh and flavour. It is also one of the freest bloomers and surest setters in whatever form grown. Had I only space for one Cherry, that one should assuredly be Governor Wood.—D. T. F.

Good Raspberries.—Raspberry Superlative deserves all that Mr. Wythes (p. 40) has said in its favour. The variety Hornet I do not know, but has Mr. Wythes tried Baumforth's Seedling? While being equal in size and cropping, it is as much superior in flavour to Superlative as Transparent Gage Plum is to the Victoria. It is also quite as hardy and free growing.—F. Bedford, *Straffan.*

Cut-leaved Currants.—In "A. D.'s" interesting notes on the Chiswick Currants, the White Cut-leaved and Mallow-leaved are described as being very distinct. Perhaps this instructive writer will say whether the Cut-leaved Black Currant is grown at Chiswick and what estimate is formed of its merits. I grew it some years ago and thought it one of the best Black Currants, with a minimum of leaves and branchlets and a maximum of fruit. Neither did I notice Fay's Prolific Red among the best. The Red Victoria is a favourite of mine, and I read with much pleasure that it was still the best late red for walls. I presume the White Crystal and Transparent are bigger and better than the old White Dutch at its best, which is expecting a good deal. It seems singular that more White Currants are not grown for dessert, as not a few say that they are the only Currants worthy of being eaten raw.—D. T. F.

The Gunton seedling Strawberries.—I have been glad to see and hear in various directions recently good news of these fine seedlings. From what I have seen and tasted of Gunton Park I quite agree with Mr. Crawford's high estimate of its merit. This writer says of Gunton Park Strawberry that it comes into use when Royal Sovereign is over, is as large as that variety, of a much darker, richer colour, while the flavour is good enough to please even the most fastidious. As a firm, good travelling Strawberry Gunton Park is about the best I have ever handled. Lord Suffield is also a most useful late Strawberry for following on, very fruitful, with stout flower-stems, holding the fruit well clear of the soil. It has a most delicious flavour, equal or superior to The Queen when well finished, rich and almost as dark in colour as Waterloo. Empress of India has probably more of the British Queen flavour than either of the others of this fine trio, and hence it may have been a little less noticed and grown in the same quarters. But this is also a second early in the open, of almost unique merit, and one of the richest flavoured Strawberries under glass.—D. T. F.

Haphazard pruning.—I chanced the other day to visit a garden in which the Apple trees showed what mischief can be worked by the knife of an ignorant jobbing gardener. The trees in question were healthy and vigorous bushes about twelve years old, and if left to themselves would have been large and probably fairly fruitful. Summer pruning of a novel and experimental character had, however, evidently been practised for at least three years. This pruning had consisted solely in shortening back a foot or more in June the strong leading shoots; consequently most of the trees were simply thickets, through which sunlight and air could barely penetrate,

the only fruit that was borne being carried on the outer branches. Summer-pruning of a sort should certainly have been practised, but should have been confined to keeping the centres of the trees clear and encouraging the growth of the best situated shoots. It would be far better for those who have not mastered the art and *rationale* of pruning to leave the trees alone rather than mutilate them merely because they think that something, they know not what, should be cut away. —S. W. F.

RED SPIDER ON FRUIT TREES.

It is not often, luckily, that fruit trees generally are so badly overrun by red spider as they are this season. On all sides are to be seen Apples, Pears and Plums badly affected by this pest, and in a less degree Peaches, Apricots and Cherries are also infested by it. Red spider naturally has done the most harm in the case of heavily cropped, somewhat stunted trees, the leaves on many of these being now of a brownish yellow hue, or more like they ought to appear next autumn. A closer examination of these leaves shows they are alive with the little mites. Peach and Apricot leaves badly infested by red spider will, unless the latter be checked or got rid of, invariably drop prematurely, and if those on the other kinds of trees hold on more tenaciously, they will yet fail to carry out their original functions. A bad attack of red spider means injury, therefore, to both top and bottom growth, and the consequences will be apparent next season as well as during this. It may perhaps be thought that the drenching rains that have fallen lately must have the effect of materially checking the onslaught, and so they have done as far as the exposed upper surfaces are concerned; underneath all is activity, and how to check this is the question. In the case of the larger standard trees, and there are many of these looking very sickly, it is doubtful if much can be done towards getting rid of the spider, though even in some of these instances I should yet feel disposed to see what a thorough soaking of liquid manure would do for them. Anything that will stimulate healthy top-growth to a certain extent acts as an antidote to red spider, and anything that tends to dwarf the tree has a converse effect. Hence the necessity for thinning out the fruit when possible in all cases where there is very much of it and no healthy leafy growth going on. There should be no hesitation about the matter, especially when the affected trees are not large, and this would include wall trees generally. Rains may or may not have been sufficient to well moisten the soil about the roots of fruit trees. The chances are not nearly enough has fallen to bring about this desirable state of affairs, and in any case the way will have been paved for a good soaking of liquid manure to be given. In addition to this something should be done in the way of exterminating as many of the red spider as can be got at. Most preparations, decoctions, or insecticides strong enough to destroy these tenacious mites are also powerful enough to damage the skins of most fruits, and if the skins are damaged, scarring and cracking are the natural result. Too much water will even have the same effect. Syringing Peach and Apricot trees every evening seldom, if ever, has an injurious effect upon the green fruit, but the smooth-skinned Nectarines will not stand it, and if water is constantly or for many hours together hanging on green Plums, these also scar and crack. Syringing Apples and Pears nightly has much the same effect as dull, wet weather after a dry period; it causes the fruit to grow to a large size, but impairs both their quality and keeping properties, while as regards ripe and ripening fruit of Cherries, Plums, and Gooseberries, these are liable to absorb too much water, and either crack or be otherwise spoilt. The only safe remedy I can suggest is sulphuring the leaves. If a good handful of flowers of sulphur is squeezed through a muslin or canvas bag into a 3-gallon can of soft water, it will mix readily enough, and with the aid of a syringe may be sprayed over the trees. It is the under sides of the leaves that most attention should be paid to, and if one syringing does not deposit a fairly good coating of sulphur on the leaves, a second dose should follow a day or two later on. This coating of dry sulphur sticking to the leaves completely checks the work of the red spider, and it is not long before it disappears. It does not injuriously affect the fruit nor greatly disfigure it, and all the while the sulphur sticks there will be no further trouble. For several years past it has been my custom to sulphur Peach, Nectarine, and Apricot trees under glass directly they are cleared of fruit, and this obviated all further necessity for damping the floors and syringing the trees by way of red spider prevention. W. I.

Melons Sutton's Triumph and Gunton Orange.—In these days when new Melons are appearing in great force at each meeting of the R.H.S., one is sometimes inclined to think it is hardly advisable to send more seedlings unless they are something decidedly better than the old-established favourites. For some years I relied solely on Hero of Lockinge and Blenheim Orange, but on losing stock of the first named substituted Sutton's Triumph, and do not wish for a better Melon either for size, depth of flesh, constitution, productiveness, or flavour. A speciality of this Melon is the very powerful perfume, thoroughly ripe fruits emitting a most delicious scent. I was not aware until the other day of any variation in the colour of the flesh, but was assured this was the case; indeed, a comparison of two fruits taken from different plants that were produced from the same packet of seed showed that whilst the exteriors were almost identical, there was a very considerable difference in the colour of the flesh, although the powerful aroma and exquisite flavour were the same in both Melons. Perhaps Mr. Palmer, who was, I believe, the raiser, or the Messrs. Sutton who sent it out, can give a little information as to this peculiarity. For a capital little Melon for a small family commend me to Gunton Orange. There is a great depth of flesh for so small a fruit, the rind being thin, and the receptacle for seed very small. The flavour is all that can be desired, and it is very hardy, free setting, and prolific. In a recent note on the cultivation of Melons the opinion is advanced that the cordon treatment necessitating close planting is partially answerable for canker. This is altogether contrary to my experience; indeed, since adopting the cordon treatment I have not been troubled with this disease, and have attributed it to the ability to get the plants out of the way so much more quickly. There is no doubt that some soils are more peculiarly liable to bring about the disease, and where this is so the plant cannot do its work too quickly. Again, if a big supply is required from limited space there is nothing like the cordon treatment, and a greater number of varieties can be grown in the given space if this is deemed advisable.—E. Burrell.

Walnuts.—It is one of the marked features of this remarkable season that we have (at least, so far as my own observation has gone) a record crop of Walnuts. Not only is there plenty of Nuts, but they are found in unusually large clusters. As a result, we shall see these Nuts very cheap later. It is to be regretted, however, that, remembering what a capital pickling constituent green Walnuts are, far more of them are not gathered and utilised for that purpose. Had that been the case whilst the Nuts were yet young and soft, not only would the still abundant remainder have been much finer, but the trees would have been materially relieved. It is to be feared that the present season's very heavy crop will necessitate some two years' rest to enable the trees to recuperate and again form fruiting buds. The present crop should, however, largely encourage the planting of Walnut trees. They always form handsome objects if ample room be afforded. They do very well in ordinary soil and are far from being difficult to please. They do well on grass, whether in a meadow, park or orchard. The trees need very little attention after they become well established, and when they are old their wood, if sound, has undoubted commercial value. Probably there is no home-grown Nut so popular as the Walnut. Walnuts are saleable even ere the rind or coat has loosened, although not then too wholesome; but as from that time they may, if well ripened, be kept with care in good condition for several months, there is ample time to utilise a good crop. Besides Walnuts, it is surprising that good small Nuts, Cobs and Filberts are not far more widely planted and cultivated. In too many gardens where these are found they are not cultivated, but rather left to grow wild.—A. D.

EARLY PEACHES ON OPEN WALLS.

Having gathered Peaches from the open walls the second week in July, it may not be out of place to send a note as to their value. Though the varieties are not considered to be all one may desire as regards flavour, I think there will be few complaints, the hot season having just suited the American varieties. Waterloo was ripe in advance of all others, and was most valuable. The fruit was splendidly coloured, the flavour this season being better than in 1893. This variety if treated liberally will be equal to some of the older kinds. Early Alexander is better than ever this season, and though I have no great love for it indoors, it certainly proves a good wall Peach, the fruit being large, beautifully marbled with crimson, and the flavour really good. This was ripe on July 15 on a south-west wall and will furnish good supplies, the trees cropping rather too freely. I only grow three varieties of these very early Peaches, and as they follow each other so closely I have some on a rather cooler aspect than others, thus giving a succession. The finest Peach of the trio is Amsden June. This at times is confounded with Early Alexander, but with me it is quite distinct, the fruit being more richly coloured, not mottled and larger. Amsden June was ripe this year at the same time as Alexander, both having the same position and doubtless both would have been earlier on a full south aspect. A few weeks ago there was an interesting article on this variety in these pages and its value for forcing fully demonstrated, so that it may be termed a valuable addition to our earliest varieties. There seems to be a prejudice against these early varieties in some quarters, and I can understand it to some extent, as without high culture the American kinds are poor, small and flavourless. There must be continual attention from the time the trees are in flower to the end of the season, the ripening of the wood being very important. As these varieties fruit so early it is important that the trees receive a certain amount of attention after the fruits are cleared to keep the foliage clean and ripen the wood. I do not know whether those who cultivate these early American varieties have noticed how small the stones are this season. Of course it is well known that the stones of these kinds are always much smaller than those of the older varieties, but they appear even smaller this year than

usual. This may be owing to excessive heat and drought, and I fear, unless wall trees have been well attended to in the way of moisture and rich mulchings of decayed manure, the fruit will be small.

During the past three years I have tried several kinds of fertilisers when the fruit was swelling, and from careful observation I find much depends upon the season, the kind of soil and the age of the trees. Last season such aids as guano, bone-meal and quick-acting fertilisers were soon absorbed, the season being wet and dull. This year I have found liquid manure very good. Peaches, I feel confident, do not get sufficient food or moisture at times and we hear complaints as to size and quality. The trees revel in a hot summer if well supplied with food and moisture, ample space being given the foliage and the old fruiting wood removed as soon as the crops are cleared. I do not know of any better trees for low walls if well exposed to the south or south-west. I find I get the finest fruits from fan-trained trees on walls 8 feet high. W. S. M.

Rose Garden.

MR. GRAY'S ROSE GARDEN AT BATH.

In a series of chapters that appeared in successive issues of the "Rosarians' Year-Book" Mr. Gray has told us "why he came south," and it was from sheer love of the Rose in its loveliest forms that he moved from the Perthshire highlands to a rocky precipice on the outskirts of Bath and essayed the formation of a Rose garden on a spot that had stricken dismay into the hearts of not a few previous prospective purchasers of the place whose gardening desires were perhaps less keen. To convert an almost inaccessible rocky slope into the Rose garden that now exists could only have been accomplished at enormous cost, but the result is worthy of the labour. These great terraces that have been cut into the hillside now form a unique garden solely devoted to the queen of flowers. Then apart from the charms of the garden itself there are those of the fine situation and beautiful landscape, rich pastures sloping from the garden down to the river Avon, the high hills beautifully adorned with trees on the opposite side. Only by creating a series of terraces was gardening possible, and every bit of stone used was dug upon the spot. These terraces now, having a southern exposure, are perfect sun-traps, and it is no matter for wonder that Tea Roses are happy upon them, especially when all that is conducive to their well-being is duly carried out. The Tea Roses are growing in thousands, and Mr. Gray is even contemplating giving up the Hybrid Perpetuals, which are also largely grown, as the plants, the finest, healthiest lot we have yet seen, do not give flowers of sufficient weight and substance, judging them from the exhibition standpoint. It is solely with a view of growing for show that Mr. Gray has made this garden, and in the day or season when his flowers are perfection they are practically invincible. It follows also that all the Roses grown in this garden are those that give flowers of exhibition merit. With a garden so large and advantageous and a mind so devoted to Tea Roses, we heartily wish that Mr. Gray would devote one terrace perhaps to the Tea Rose as a garden flower, grouping the best varieties thereon, and letting them carry a score of blossoms where to realise the present show standard but one can be allowed. The show growers produce glorious individual flowers, but the grace and beauty of Tea Roses tossing in many-flowered clusters, filling the garden with fragrance, are other aspects of the flower which we think the most beautiful of all, whilst from an artistic point of view comparison is needless. This, however, by the way, for even the greatest disbeliever in Rose show methods of displaying the charms of the flower cannot but experience a sense of great enjoyment in a garden like Mr. Gray's, where every flower seen is a perfect one of its kind. Maréchal Niel is grown to the extent of some hundreds on walls and in the beds as well, Mr. Gray practising a simple expedient with his standard plants in open quarters of tying out the vigorous shoots horizontally, thus forming a flat, but circular head, magnificent flowers being obtained, shaded and protected by the plants' own leaves. All the best Teas that exhibitors are bound to grow it is almost needless to say were seen in their finest form. Among a few kinds specially noted is La Princesse Vera, conspicuous alike for robust growth as well as for its fine and numerous flowers, which are large, full, of a cream white colour tinged with pink in the outer petals. Comtesse Panisse was very fine, also Perle de Lyon, and Reine du Portugal, though a hopeless Rose in most gardens, was giving good flowers here. Comtesse de Nadaillac puts on its richest tints too in this sunny garden, and Francisca Kruger was so bright and beautiful, that we scarcely recognised it. Jean Ducher, responding to the heat of the year, was a glow of many colours such as only long days of successive sunshine can elaborate out of its great buds, which only in sustained fine weather reach their greatest perfection. Thus might many more be singled out for special mention, especially among the Teas, which appeal to us by special and strongly distinctive characteristics. No mere discription in words can do justice to this garden, or adequately express the sense of pleasure experienced. Among many pleasant days spent among Roses there is none that will live longer in grateful remembrance than this. Mr. Gray not only presides over, but entirely manages his own place, and whatever cultural skill his Roses evince, which is considerable, to him is the credit due. Last, but far from least, all Rose lovers are welcome visitors, and ready permission is granted them to inspect the charming spot.

Kitchen Garden.

POTATOES.

The heavy, though so late, rains now falling will not fail to have a very considerable influence on the Potato crop, and already much concern is being manifested as to what that influence might be. At first the moderate showers were credited with a tendency to produce growing out of the young tubers, and it is very likely, so far as not only the earlier varieties not yet fully ripe, or later ones that have had both top and tuber growth checked, that the new impetus given by the rains to growth will produce the growing out anticipated. No doubt in most cases it will be wise to get up the earlier or more matured varieties so soon as possible, as it would be less an evil to have them up good, if small, than to leave them to supertuberate, and thus have a comparatively worthless tuber crop. But already the rain has been so considerable, that the lowest roots have been reached and the soil to fully 1 foot in depth thoroughly moistened. There is no prospect whatever that after such a soaking, should the rain cease (even at the moment of writing), Potatoes wil not have ample moisture to satisfy all needs so long as required. Could we be assured that the rain would stop there, then there would be no doubt but that we should have a very heavy, perhaps an immense, late crop. But once the weather breaks in July, and especially after so long and unusual a period of drought as we have experienced, there is no telling how much rain there may be, or how soon the drought may be turned into a flood. To town dwellers the rain comes as an unmitigated boon; to rural dwellers, and especially to farmers and gardeners, it may be of very mixed value. Thus, if the wet be prolonged, then immense harm will be done to Potatoes and Corn crops, however beneficial it may be to fruit trees and some root crops. In late Potatoes the tendency of prolonged rains, with consequent lack of moisture, will be to promote inordinate top growth with excessive, but late and watery tuber crops; or else we shall see such a visitation of the Potato disease, consequent upon the chilling of the soil and lowering of the temperature, as may be productive of greater loss than would have resulted had no rain fallen for several weeks longer. It seems very probable that those breadths of Potatoes that have ample room between the plants will come off best in any case. Dense planting is still very much an evil, for so many persons do not yet realise the importance of the access of plenty of light and air to the leafage. It is largely through this foliage agency that good sound starchy tubers are formed. A. D.

Potato White Elephant.—I know several gardeners who still cling to this Potato for the main supply. The way they treat it to prevent having a crop of much too large tubers is to allow all the sprouts to grow, each root having then half a dozen shoots. The tubers from such growth are naturally much smaller than when the growths are limited to two shoots, as in the ordinary method of cultivation.—E. M.

The Mushroom house.—Now is a good time to select a wet day for thoroughly cleaning this structure in readiness for the coming season. Old exhausted beds should be cleared out, all walls whitewashed, and if the presence of woodlice is suspected, boiling water poured on the floors and in all crevices will banish them. See that the heating apparatus is in sound condition and throw open doors and ventilators to thoroughly sweeten the structure. In places where the majority of horses are turned out to grass at this period, manure from corn-fed horses is scarce; therefore, it will be wise if early Mushrooms are required to commence saving it, if even in small quantities, it taking some time to collect sufficient to form a good-sized early bed.

Small Peas.—I agree with Mr. Crawford (p. 65) that many small-podded varieties of Peas have very much to recommend them. For exhibition, of course, the small-podded varieties are at a disadvantage, except during the month of May or very early in June when the larger-growing kinds are not ready. This year I grew Cannell's English Wonder for an early supply, and it was surprising what a number of succulent Peas the short pods of this variety yielded. I measured two pods; one barely 2½ inches long had seven fine peas, the other just 2½ inches long having eight peas. I have grown for the last two seasons a variety named Goldfinder, a tall-growing, short-podded kind, but a wonderful cropper and of capital quality. The pods are really crammed with eight and ten peas of a deep green colour. No matter whether grown early, midseason, or late, the crop and quality are equally good. Take, again, Stratagem, a short-podded Pea, but bearing profusely a large quantity of well-filled pods. I have this year grown several of Eckford's newer varieties, and find that many of them are short-podded sorts. He must have had this idea in his head when working to obtain new varieties. Shropshire Hero much resembles Veitch's Perfection in the shape of its pod. It is a free-bearing kind, having seven and eight large peas in each pod. Renown is another well worth attention; the rather short deep green pods are literally

crammed with large peas. Epicure is a taller growing kind, reaching 5 ft. in a season like the present, and bears profusely, some of the pods containing as many as ten full-sized peas. Critic is another variety growing 5 feet high, having quite short pods, but well filled with extra large peas. Essential, again, has short pods, which contain eight and nine peas. Juno grows but 2 feet high, is free bearing; its well-filled pods are short, but contain peas of excellent quality. Several others might be named, but enough has been said to point to the fact that short-podded, free-bearing varieties are becoming more appreciated when they combine these elements and the best of flavour.—E. M.

Early Cauliflowers.—In this neighbourhood (South Herefordshire) the season has been a most trying one for many varieties of Cauliflowers owing to the drought and the hot weather, and it is interesting to observe the difference. Snowball was the earliest by a few days, but the heads were so small as scarcely to be worth sending to the kitchen, and they quickly opened out. Early London followed with large close heads, many of them weighing 3½ lbs. when trimmed, and remained in a good condition for some days after they were fully developed with simply one or two leaves bent over them. I think the stock I have had of Walcheren must have degenerated, as the plants have been a very poor lot as compared with Early London, and though sown at the same date Walcheren was nine days later in coming into use. Defiance produced rather small, but beautifully formed heads, just the size for a gentleman's table, only about three days later than Early London. Several other varieties are so much like some of the sorts named in every respect that I omit mentioning them, as this season can scarcely be considered one to bring out all the good points of any variety, but rather to bring into prominence the bad ones. Provided a true stock of Early London can be procured, I think it second to none as an early variety, sown either in the autumn or spring. Unfortunately, we sometimes get a spurious strain, and in our disappointment are liable to forget how well it has behaved in the past.—W. G. C.

Public Gardens.

THE VICTORIA PARK AT BATH.

Few provincial public parks are set in such picturesque surroundings or give such commanding views of the landscape as the Victoria Park at Bath. Its beauties alike of situation and those that have resulted from wise planting are exceedingly great. Here on a high hill crest judicious planting and simplicity of design characterise a road which is shaded and sheltered by a long and informal avenue of native trees in rich variety, yet which at the same time allows the eye to obtain frequent glimpses of the valley through which the Avon winds and of the opposite hills. A large portion of the city too, part nestling in the valley and extending far up the tree-adorned slopes on either side, is embraced in this commanding view. Turning to the trees, shrubs and flowers, the most superficial observers cannot but be impressed by the beauty of the surroundings. There is very little of that gaudy, showy kind of bedding-out which at its best is a poor and fleeting substitute for the aspects that are only obtained through the use of more or less permanent types of vegetation that happily predominate here. We have often remarked that, instead of filling our gardens and parks almost entirely with gloomy evergreens and funereal conifers, the different forms of native trees should have preference. The common Elm is known to almost everyone, but there are many varieties that differ in leaf and style of growth, as may here be seen, and although we have met with most of the Elms growing in this park at different times, we have never seen a collection in one place so complete as here. This tree is one of the features of the central avenue, but, happily, is not overdone, Horse Chestnuts predominating in other parts, with sometimes a few Acers, Poplars, and other fine trees which give variety of outline and of leaf growth, not omitting to mention two or three fine Tulip Trees which were abundantly in blossom when we saw them. One of the side walks is fringed with an admirable collection of Thorns, the trees standing on the Grass, and each sufficiently isolated from the next to allow of natural growth. This must be a pretty feature at flowering time, and no lovelier family of trees could be named as being worthy of an important position in a public park. There are noble Sweet Bays here 12 feet to 14 feet in height, and the winter, though it has partly defoliated them, has not cut them back as in many places, whilst, strange to say, Darwin's Barberry has been a much greater sufferer. What was once a grand specimen of Garrya elliptica is reduced to a stump by last winter, but one of the best of Evergreens—the Holly—that does well in this park, is represented in its best green, golden and silver variegated varieties. The little lakes have their margins adorned with vegetation in character, two Babylonian Weeping Willows being a prominent feature, also the American Weeping Willow. The golden Elder is here effectively massed, and the Sea Buckthorn gives a charming and restful tone of silver-grey, whilst a little later its shoots will glow brightly with orange-red berries.

Conifers.

The dell is adorned with these, and it was a happy idea to place them here and confine them mainly to this spot. On the Grass slopes they are quite at home, and the specimens of some trees are good. Even the Wellingtonia we could not help admiring, over-planted and over-praised as it has been. Its handsome bole must be quite 4 feet in diameter, whilst its outline is more informal and with less of the sugar-cone shape than we generally see, whilst in colour it is a picture of health—rich green above, silvery beneath, and with none of that rusty tint which so often characterises this tree. Mr. Milburn, who so ably superintends this park, attributes this healthy colour to non-removal of the leaves that annually fall, and now form a thick deposit, which, slowly decaying, without a doubt feed the roots, whose fibres were active, forming a matted growth in the surface soil. A good companion to this tree, and quite as fine, is the specimen of the Californian Redwood tree (Sequoia sempervirens). The Weeping Yew (Taxus baccata Dovastoni) is a feature here, and we have never seen a finer plant. It is really a great spreading bush, with no apparent growth of stem, but situated on a steep slope; its semi-prostrate, weeping branches, luxuriant in deep green colour, cover and completely hide a large piece of ground. A tall and lovely Weeping Birch near is singularly happy, its situation and effect giving a welcome break to the prevailing dark tone. The Weeping Cypress (Cupressus funebris) is represented by a very healthy plant, whilst Nootka and Lawson's Cypresses and Thuja gigantea all flourish in the fullest degree. The Pine tribe (Pinus, Picea, and Abies) is admirably represented, and one of the finest bushes of Daphniphyllum glaucescens grows in this dell, which, though attractive at all times, must be doubly effective in mid-winter. No account of the trees would be complete that omitted Arbutus Andrachne, one specimen here being very noteworthy. It has a clear stem rising about a yard from the turf, a wide-branching head of long red-barked branches which are conspicuous in colour, and a fine crown of foliage. Other fine trees are the Manna Ash, Cerasus serrulata, a specimen planted by Loudon; Koelreuteria paniculata, Pyrus salicifolia, with delightful silvery leaves; the Kentucky Coffee Tree (Gymnocladus), the Maiden-hair Tree (Salisburia), Ptelea trifoliata, Corylus Colurna and the variegated Turkey Oak. Mr. Milburn rather deplored the fact that Rhododendrons refused to do well, but if we may judge from what usually happens in most gardens where they thrive, this is rather something to be thankful for, and in consequence we see a park of marked individuality in its tree and shrub life. The latest addition is a department, and an integral part of the park itself, devoted to

Hardy Flowers,

an example that many public parks might worthily imitate. The ground has been thrown into naturally graded mounds, in one place an easy slope, in another steeper, varied with rocks, upon and between which are cushions of Stonecrops, Rockfoils and Houseleeks, with numerous other alpine flowers besides. We were particularly pleased to see that Mr. Milburn had adopted the natural and true way of planting his flowers in simple groups and masses, thereby securing bold and combined effects that are lost by scattering and indiscriminate mixing. For example, in one place we noticed a fine break of Sea Hollies, brilliant in colour and a new revelation of flower beauty to those accustomed to the average assemblage of flowers that appear in public parks. A moist slope in another place was covered with Christmas and Lenten Roses in perfect health and vigour, and the bunch Primroses have a place also. A collection of hardy Ferns is grouped in a spot congenial to them, and a peaty corner elsewhere has hardy Orchids and other peat-loving subjects. Telekia speciosa massed on the grass suggested an admirable use for not a few of the stronger hardy flowers. In this hardy flower garden, also, are many choice shrubs grouped or isolated with good effect. Xanthoceras sorbifolia was in fruit, also Elæagnus edulis. A spreading bush of Clerodendron trichotomum, passing out of flower, will also be a picture soon, with its electric-blue seeds set in their red capsules. Romneya Coulteri was flourishing, and Cæsalpinia japonica, though partially cut back by the winter's frost, strong in growth. Other less rare, but very beautiful, shrubs prominent here were Spiræa Lindleyana, S. ariæfolia, S. japonica, S. hypericifolia, all grouped and flowering together; also the Bladder Sennas, Olearia Haasti, Photinia serrulata, Aralia Maximowiczi, most distinct in leafage, and the Judas Tree. In the grass, too, upon which most of these choice shrubs are grouped, spring-flowering bulbs from Snowdrops to Narcissi are naturalised.

In this park, at least, the season is denoted by the flowers that adorn it, and the garden is full of changing life, which is as it should be, and the aspect much to be preferred to that of the gaudy, monotonous garden that is made for the summer months alone, with its after-legacy of six months' dreary bareness.

Churchyard Bottom Wood.—The agitation in favour of the acquisition of Churchyard Bottom Wood, Highgate, has resulted in the Ecclesiastical Commissioners, who own it, making a considerable concession. They will sell the wood

(sixty-five acres) to the district council for £25,000, and waive their right to cut two roads through it. By this the rural character of the wood is preserved, and the Charity Commissioners, who are going to complete their scheme by selling the front for building purposes, will gain another 50 feet frontage, and enable two more houses to be erected upon the land, and thus another £20 a year will be added to the prospective income of the charities.

New park for Buxton.—The Duke of Devonshire has presented a valuable site, comprising not less than six acres, to the Buxton town council for the purposes of a public park.

THE OXFORD BOTANIC GARDEN.

This old-established garden, so long and ably tended by the late Mr. Baxter, still maintains its high standard under the care of the present curator, Mr. W. Baker, and when there recently we were greatly pleased to see that the authorities had carried out a much-needed improvement by building an entirely new range of glass houses in the place of the old structures that had served their purpose and outlasted their time. Whilst the arrangement of the garden generally and its outside features are much the same as in years gone by, the renewal and extension of the glass department have afforded Mr. Baker fresh scope, which he has quickly availed himself of, the disposition, arrangement, and healthy appearance of the whole collection of plants being of the most creditable character. Special mention must be made of the house devoted to tropical aquatic plants, which, although not so large as the one in which they are grown at Kew, is not less interesting, whilst the tank being raised considerably above the ground level, the Water Lilies are seen to better advantage, being brought so much nearer to the eye. This tank at the time of our visit was a picture with many flowers, Nymphæa Lotus and N. zanzibarensis being present in their best and most varied forms. Mr. Baker was also successful in flowering the new N. Sturtevanti in this tank last year. Several of the new hardy hybrid Water Lilies were also flowering, but here, as elsewhere under glass, they do not show to such advantage nor attain such noble size as in the open air. Among numerous stove aquatics beside Lilies around the margin of the tank a mass of Sagittaria montevidensis was very conspicuous alike in its immense leaves and prettily marked flowers.

The collection of cactaceous plants is a comprehensive one and fills one structure, whilst another contains a good collection of Orchids, and the Ferns, both in number and size of plants, already require more space than the structure allotted to them affords. Other houses contain a mixed collection of flowering and fine-leaved plants, whilst a beautiful as well as a most convenient feature of the new range of houses is a glass-covered corridor that connects them. This is brilliant with flowering plants, Lonicera sempervirens, Plumbago capensis, Browallia Jamesoni, trained Fuchsias and other greenhouse climbers being very gay at the time of our visit.

The old walls that enclose a greater part of the garden are adorned with a host of hardy climbing plants, and although the usual botanical garden method of arranging the hardy flowers in their natural orders is the least artistic way, the beds here contain a large collection, including many of interest and beauty, succeeding each other throughout the season. Trees are quite a feature, as although their number must of necessity be limited, what there are are mostly uncommon and notable representatives of their kind. The specimen of Sophora japonica is exceptionally fine, probably one of the largest in English gardens, its stem nearly 2 feet in diameter, carrying a wide-spreading head of lovely leafage. The Hop tree (Ptelea trifoliata) does well and flowers freely, the tree being covered with its curious clusters of winged seed-pods. Another uncommon tree which the winter did not hurt in the least is the Paper Mulberry (Broussonetia papyrifera), so called because the Japanese have made paper from its leaves. These are somewhat heart-shaped and rather downy, whilst fruits in abundance on all the branches much resembled those of the Mulberry. There is a very fine tree of the white Mulberry, also one of the best specimens of the Constantinople Nut (Corylus Colurna), which fruits freely and was bearing large clusters of its hard-shelled nuts. Diospyros Lotus thrives and fruits abundantly, and Salisburia adiantifolia, Virgilia lutea and Gymnocladus canadensis are represented by large and handsome trees. The specimen of Fraxinus ornus is a grand one, and must be pretty when in flower, whilst another most distinct Ash is F. pubescens, which has very large leaves. The trees of Pyrus domestica, Cratægus Aronia, C. tanacetifolia and the Fern-leaved Beech are all worthy of mention. Among flowering shrubs a group of Rubus odoratus was beautiful alike in leaf and flower, and several shrubby Spiræas, notably S. Lindleyana, were conspicuous in flower. A shaded border also contains a good collection of hardy Ferns. The inhabitants of Oxford are fortunate in having such a well stocked garden, which is of easy access and open to the public from an early morning hour, whilst the facilities it affords for botanical study must be great.

Notes from Chester.—The sprays of Acer colchicum rubrum sent will suggest the gorgeous colour effect which is given along the sweep of the avenue in which plants of this beautiful Maple are freely intermingled. The Hydrangeas in the shrubberies are distinct and conspicuous. The flowering heads, such as the spike of Hydrangea paniculata grandiflora which we send you, set off splendidly a bank of green. The Heaths are always pretty. Erica vagans alba is a gem. Clethra arborea is not easily surpassed either for flower or foliage, and its beautiful bells are charged with a fragrance that is charming.—Dicksons.

Good dry-weather Pansies.—The present season has not been a favourable one for tufted Pansies, although, in spite of it, we have seen them good in many gardens. At Chiswick recently we made note of several that seemed to be good drought-resisters. The old Duchess of Sutherland was one of the best, and still remains a Pansy of high merit that must not be lightly regarded for the sake of newer kinds. William Niel was charming in its unique shade of rosy mauve colour. Some of Dr. Stuart's new varieties were most conspicuous for healthy growth and abundance of blossom. Christiania, cream-white, with rich yellow eye; Sweet Lavender, pale blue; Blue Gown, deeper blue and one of the most persistent; Old Gold, dwarf and neat in habit, rich yellow; Cordelia, cream-white; White Wings, of a purer white than the preceding; and Blush Queen were all noteworthy for their vigour, freshness and profusion of flowers.

Centaurea ruthenica.—There are several very coarse and weedy Centaureas in cultivation that have no merit whatever as garden flowers, and doubtless the presence of these, or the knowledge of their lack of beauty, has served to divert attention from those of the family that are really beautiful. C. ruthenica is worthy of a place in the most select collection of hardy plants, and we noted with pleasure at Winchmore Hill, where choice things in quantity are the aim rather than a few of everything, that Mr. Perry is working up a stock of this species. It is a graceful plant in leafage alone, whilst its pale yellow, long-stalked flowers are handsome and lasting on the plant or in the house. We have seen a good deal of the coarse, but showy C. macrocephala in the market this season in a cut state, and if there is a demand for it, C. ruthenica would surely be in greater demand if it could be had. A coloured plate of this species was given in The Garden of October 21, 1893.

The Royal Gardeners' Orphan Fund.—The usual monthly meeting of the committee took place on the 26th ult., Mr. W. Marshall in the chair. The following special receipts were announced: Wimbledon Horticultural Society, sale of flowers, £5 5s.; proceeds of Rose fair at Croydon, per Mr. G. W. Cummings, £7; Mr. W. A. Miller, Underley Hall Gardens, box, £1 18s. 8d., and Mr. C. Herrin, Dropmore Gardens, box, 17s. 6d. The death of Mr. John Wills, a member of the executive committee, having been reported, the secretary was instructed to convey to Mrs. Wills the deep sympathy of the committee in her bereavement and their profound regret at the loss of so noble a supporter of the fund and of such a sincere and valued friend.

Kitchen garden walks.—Where the old practice of using salt on walks for destroying weeds is still adhered to the present is a capital time to renew the dressing. This will ensure clean walks till late autumn, when another and final dressing may be given. Where rains have recently fallen it will be advisable to give all walks another good rolling, this also lasting until October.

Hand-list of Trees and Shrubs grown at Kew.—On applying to the agent for Government publications here (Edinburgh) to procure for me a copy of the above, I am informed that it is only to be had at Kew. There must be many persons like myself desirous of having a copy of this useful publication, but as it cannot apparently be had through the usual trade channels, it will be a favour if you will kindly say for the benefit of myself and others at a distance how it is to be had.—F.

The weather in West Herts.—July, taken as a whole, was of about average temperature. Owing doubtless to the unusual prevalence of bright sunshine and the heat it had acquired during the preceding month, the soil was considerably warmer than the July mean. During the first half of the month little rain fell, but after this there were very few fine days. The total measurement amounted to rather more than 4½ inches, which is about 2 inches in excess of the average for the month and greater than in any July since 1880, or for fifteen years. The most noteworthy feature of the recent heavy rainfall was the way in which the rain penetrated the parched ground and the depth to which it descended into it. Indeed, two-thirds of the total quantity deposited has already come through the heavy soil gauge and nearly as much through the light soil gauge.—E. M., *Berkhamsted.*

Tillandsia Durati.—In the article upon this plant in last week's Garden (p. 49), through a misprint, the word "flower-pot" appears instead of "flower-plot." The passage should read: "Hibiscus syriacus growing in a flower-plot."—W. M.

Names of plants.—*Old Subscriber.*—1, Liriodendron tulipifera; 2, Euonymus japonicus aureus; 3, Griselinia littoralis; 4, Tsuga adpressa; 5, Catalpa speciosa; 6, Retinospora filifera; 7, Spiræa Douglasi; 8, Thujopsis dolabrata; 9, Biota orientalis aurea; 10, Betula laciniata; 11, variegated Juniper; 12, Tilia Moltkei.——*H. Peachey.*—Rhus glabra.——*W. H. Cook.*—1, Lythrum salicaria; 2, Helenium pumilum; 3, Heliopsis patula; 4, Epilobium angustifolium; 5, Echinops ruthenicus; 6, send better specimen.——*J. R. B.*—The trumpet Honeysuckle (Lonicera sempervirens).

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"This is an Art
Which does mend Nature; change it rather; but
The Art itself is Nature."—*Shakespeare.*

ORCHARD AND FRUIT GARDEN.

MARKETING APPLES.

Although a great deal of information has been circulated by means of the horticultural press, fruit conferences, and other channels on the best mode of marketing fruit, I think little attention has been given as to the best time to market different varieties of Apples to ensure realising the highest value for the same. The proper time to dispose of the Apples is of more importance than many would imagine, and a few notes on the subject may be of interest to those growers who have not had much experience and will shortly be selling their fruit. Taking the earliest varieties first, we have White Transparent, White Astrachan, and White Juneating ready now at the end of July, and I find it pays best to allow each of these sorts to become ripe before consigning to market, a higher price being obtained for them than if sent before that period. As the varieties are soft in the flesh they should be sent in small packages, as, for instance, half sieves or flats, lining these with soft hay or similar material, over which clean paper is placed, and the Apples carefully packed therein, so that no movement of the fruit can take place in transit to market. Devonshire Quarrenden, Cardinal, Mr. Gladstone, Stubbard, Duchess of Oldenburg, and other varieties of these or Beauty of Bath type that put on a nice colour should not be picked or marketed until the colour is well developed, as the value is considerably increased thereby. On the other hand, Keswick Codlin, Lord Suffield, and Lord Grosvenor are most valuable if sold before they look ripe; buyers in the northern markets will not purchase the three varieties named except at a low rate. I once sent a large consignment away fully ripe, and beautiful to look at, thinking to secure top prices, but the salesman wrote per return that £6 per ton was lost by keeping them until ripe and that his buyers would not give good prices for such Apples, as they kept badly on their hands. But there are exceptions, as, for instance, Golden Spire has always realised a much better price when ripe than earlier; its rich yellow colour and firm skin cause it to travel well and look very attractive when opened for buyers' inspection. The same also applies to Queen Caroline or Brown's Codlin and Ecklinville Seedling. I have sent away many tons of the latter during the past ten years, and have always found them most valuable when fully grown, but they must be packed with great care and in small quantities together—28 lbs. is plenty to have in one package. Frogmore Prolific and Potts' Seedling are somewhat tender in the skin, and should be sold immediately it is seen they have attained a full size. If kept until the Apples assume a yellowish tinge they bruise easily and look damaged when opened; consequently a lower price must be accepted. Yorkshire Beauty and Worcester Pearmain realise the highest value when deeply tinged with red; in fact, all varieties that put on a handsome colour like the two sorts sell well, if of good size, in the manufacturing districts.

The grower must be guided by circumstances with late-keeping varieties like Dumelow's Seedling, Newton Wonder, Lane's Prince Albert, Bramley's Seedling, and others of that class. My experience is that if £1 or upwards per cwt. can be obtained at the time the fruit is ready to pick, it will pay to send it away at once, thus avoiding the labour and expense of storing and the loss of weight that takes place, for Apples when stored for several months lose considerably in weight. Again, the good or bad crops in America and Canada must be taken into account, as they exercise a very material difference on whether it will pay or not to store Apples largely. Up to the present the Australian Apples need not be feared when put into competition with our own late varieties. From a fair amount of knowledge of prices for late fruit, I believe that Apples worth £1 per cwt. prior to Christmas should realise 30s. per cwt. in March to pay for the extra labour and loss of weight; if more than the latter sum can be obtained, then it pays well for storing the Apples. Sometimes £2 and upwards can be easily secured for these late supplies, but the grower ought to be fairly certain that the supply from abroad will not be heavy, and also that his fruit rooms are adapted for keeping the Apples plump and sound, as shrivelled fruit is a drug and difficult to sell at anything approaching a paying price. W. G. C.

Strawberry Competitor forced.—I forced a few plants last year to test its flavour. I had previously seen it in fine condition with a market grower, and was so impressed with it that I gave it a trial. Competitor ripens very quickly, the fruit very large, handsome and of fair quality. When hard forced it is superior to Noble and a better traveller. The potting season now being at hand, those who value large Strawberries would do well to give it a trial. As an outdoor variety it is most vigorous, and does well in a dry season. It requires plenty of space, as if the plants are crowded many fruits are lost.—W. S. M.

The summer pruning of fruit trees.—"J. C." (page 60) grasps the force of summer pruning when he says it would be wise not to allow varieties which are prone to make much wood to have their own way in the spring, practising pinching as in the case of pot trees and trees generally grown under glass. Thus sun and air would be able to act beneficially on each shoot and leaf, a thing impossible under the crowding system; and as the more wood a tree makes the more it is inclined to, this early pinching would lessen the liability to grossness and secure a more evenly balanced condition of the tree generally. In other words, the wood would be moulded into fertility through the breaking down of gross buds or shoots into moderate growths, and fully exposing the latter to light, heat and air. But because skilful summer pinching or pruning can do so much, some have pushed it to excess, and by cutting too much and all at one time the cultivator inflicts serious evils on the trees. Summer pruning should be a process running parallel with growth. Nothing could be more unnatural than the way in which it is often carried out, the whole of the current year's shoots pinched, cut, or clipped off at one fell swoop. Can it be any wonder if such sudden and severe arrestment of shoot growths should also stop the supply of food and sap to the fruit, or prevent it ever afterwards attaining to its normal size or developing its best flavour? This wholesale and sudden defoliation of shoots and leaves, this sudden transition from dense shadow to glaring sunshine, is as injurious to the buds as the fruit. Better far go over the trees at intervals extending over a month or six weeks, and thus by two or more easy stages complete the process of summer pruning. The whole matter would also be made very much easier through the stopping of the strongest buds early in the season and the removal of all the weaker shoots bodily so soon as their character was determined. The majority of those left would then be of that medium and even growth most favourable to the development of fruit-bearing buds.—D. T. F.

Good Raspberries.—In a short note on good Raspberries (p. 40) I noted the excellence of Superlative and Hornet. At p. 88 Mr. F. Bedford asks if I have tried Baumforth's Seedling, which he considers superior. Baumforth's Seedling is certainly a good Raspberry, but it is not equal to Superlative, and my opinion is not singular, as in conversation a short time back with a first class hardy fruit grower he told me Superlative was the very best Raspberry grown and the most profitable. It cannot be termed the earliest variety grown, and the fruit is more acid than that of some kinds, but for preserves and tarts the brisk acid flavour combined with the firm fruit is an advantage. I have for years advocated the culture of Superlative in these pages, and for the past four years have planted only one kind (Superlative) on account of its cropping qualities, late bearing, and the few small fruits it produces. Some few seasons ago I had a failure with Raspberries, and, requiring this fruit in quantity, tried Superlative, it being an easy matter to gather 50 lbs. of fruit from a few short rows of plants. In seasons of drought, like 1893 and this year, in our soil Superlative is the only variety I have grown that may be depended upon. Baumforth's may be termed an improved Northumberland Fillbasket, and I have not a word to say against it, but it does not succeed so well on our soil. Mr. Bedford may grow these varieties under more favourable conditions. Again, has he got the true Superlative, as I cannot agree with his comparisons as to flavour? If the long time it crops is taken into account, I consider it the very best Raspberry grown. Given good culture and not allowed to remain too long in one place, it will make grand growths and give very fine fruit.—G. Wythes.

GOOD RED AND WHITE CURRANTS.

It is surprising that more attention has not been paid to the larger varieties of Red Currants, such as Cherry and La Versaillaise, which are superior to the small old red variety so much grown. It may be said that some of the larger kinds do not fruit so freely as the smaller ones, but much depends upon the mode of culture and the soil. La Versaillaise is a favourite with many who desire large fruit, but it is not liked by all growers on account of the brittleness of the shoots and branches. I have seen it stated that this variety is not worth cultivation, on account of its gross habit and loss of shoots when laden with fruit. This may be prevented by severe pruning in winter, keeping the plants very dwarf, and stopping the summer growth in the fruiting season. By growing dwarfer trees there is less fear of breakage, and it is a simple matter to stop the strong shoots in the growing season; indeed, the main growth may be pinched, and thus reduced in weight. If the weak shoots are cut out there will be less fear of breakage. I do not know of any variety so large as this. On the Continent it is grown under the name of Belle de Fontenay, being much liked for its large fruit and fine acid flavour. This variety fruits freely on the old wood and spurs. If only one large red kind be grown, the choice should be given to the Red Cherry, a variety with many synonyms, and certainly one of the very best. The fruits may not equal those of La Versaillaise in size, but the crop is little inferior. The plant is of a dwarf habit and of compact growth. Red Cherry is superior to the Old Red, Old Dutch, and the Cut-leaved variety. A few seasons ago I was advised to give La Constante a trial. This must be included in the list of good kinds. It is a large fruit, and much later than any of the kinds named above. The fruit keeps a long time before it shrivels.

There are fewer white kinds, a couple of varieties in most gardens being sufficient. The White Currant is not grown nearly so much, as at one time when glass was less plentiful the fruits were used for dessert. White Versailles is a good

companion to the red La Versaillaise, the berries large, pure white, with a very thin skin. The White Dutch cut-leaved variety is also very good, bearing well, the fruit of good size and quality; this is also known as Wilmot's Large White. Though a slow grower, it requires to be kept pruned to get fine fruit, topping the trees when in rich land. There are others, such as White Transparent, the berries large and useful for dessert. For walls, Currants are admirably adapted, as the fruit can be so easily preserved from birds. G. Wythes.

GOOSEBERRIES IN 1895.

In spite of the drought in many parts of the country the Gooseberry crop has been remarkably good. I am aware in some districts the trees of a few kinds were crippled by frost, but they made such progress during April and May, that its evil effects were soon obliterated. Of course, there has been more trouble than usual with red spider, and complaints have been frequent as to the ravages of caterpillars. Gooseberries in many gardens do not get nearly enough food, and in some none at all. In light gravelly soils the trees soon suffer, and well-known growers of these fruits mulch early, giving rich manures, and to obtain fine fruits lighten the crop. By doing so early in the season there is no loss, as the large kinds are most useful in a green state when gathered early. More attention is now paid to trees that produce large fruits, as these are more valuable early in the season than when ripe. Such kinds as Berry's Early Kent and Whinham's Industry have been extensively planted for early fruit and are a valuable source of income. For private gardens there is an unlimited selection—in fact, too many, and one must not depend solely upon the large kinds if flavour is the first consideration. Again, some of the very large kinds have much thicker skins than the smaller ones, and much of the fruit is lost when the thick skin is taken into account. Some of the very best kinds weep badly, growing close to the ground. Most of the Lancashire prize berries have this habit, and well repay support in the way of a trellis, wall or stakes. I venture to assert that the best varieties when given wall culture are not inferior to the best forced fruits if gathered when the fruits are cool or early in the day. For flavour such varieties as Pitmaston Green Gage, Green Overall, Bright Venus, Harry, Early Red, Early Green, Early Sulphur, Red Champagne, Green Walnut, Red Warrington, Keens' Seedling and Ironmonger will not fail to please, and though not equal in size to some, they may be termed the best where flavour is considered. Those who can devote a north wall to Gooseberries and grow them as cordons, either double or with four shoots springing from the base, will have a nice lot of fruit for a long period. Grown thus, the trees give little trouble when once the growths have made good progress. Of course, much quicker results are obtained from single cordon growths, but I do not advise them, as though they are admirably adapted for training to wires or stakes, they throw out so much sucker growth at the base when planted on walls, that the double cordon is preferable with two or four leaders at about 6 inches or 9 inches from the soil. Grown thus there is little trouble, as the shoots or lateral growths can be kept well spurred back, and the fruits can be readily preserved if the trees are kept close to the wall. In such a position I have never known them to fail, always cropping freely, and if given a good mulch of decayed manure when the fruits have set there is little further trouble, and red spider is not known. The trees like a cool border, and make very fine fruiting spurs every season. In many gardens there is often vacant wall space which could be utilised, and it would well repay to renew the bushes more frequently. Young trees are better able to resist extremes of weather and give much finer fruits. In planting it is well to get the ground into condition early in the autumn and plant just as the leaves have fallen. Unless grown for exhibition, some half-dozen kinds of each section are sufficient.

The best varieties this season with me on poor soil have been Whitesmith, King of Trumps, Aline, and Lady Leicester, all white varieties—the best reds being Conquering Hero, Forester, and Rough Red. Among the yellows, Leader, Drill, Tiger, Trumpeter, and Early Sulphur are the best, the green kinds being Green Gascoigne, Green Overall, Surprise, Stockwell, Keepsake, Telegraph, and Berry's Kent for earliness. This is a select list, but out of hundreds to select from it may be relied upon. It includes early and late varieties, not fastidious as to soil, and good croppers.

G. Wythes.

SEASONABLE VINE NOTES.

If wasps' nests are as numerous generally as they are in this part of Herefordshire, Grape growers will be greatly troubled by these pests. In one field of twenty acres over eighty nests have been destroyed by the aid of cyanide of potassium, and yet they appear as numerous as ever. Fortunately there are means of preventing the wasps doing very much damage in vineries and other fruit houses without enclosing the fruit in muslin bags, which I saw being done recently. For a number of years I have relied upon Davis's wasp destroyer to keep the enemy at bay with the most gratifying results. Immediately the wasps commence to attack the fruit, a little of the liquid is dropped into the berries that have been eaten; in a very short time it will be seen that any wasps visiting the doctored berries are in difficulties; some roll off the berries and drop on the floor, others manage to fly a short distance, while a few may pass out through the ventilators, but in every case a peculiar buzzing sound, which seems to alarm all their fellows in the vinery, is made by the wasps. By a little perseverance in tainting the berries that have been damaged, wasps will avoid the vinery and do practically no harm. Personally I have not lost a bunch since using the destroyer. A word of caution is necessary in using this mixture. A strong warning should be given to young hands not to eat or touch any of the Grapes, neither should the bottle containing the mixture be carelessly left about. Only a short time ago there was a very painful proof of the poisonous nature of the above, and accidents frequently occur through the carelessness or want of thought of people who are well aware of the great value of these poisonous mixtures when properly employed.

Insect pests, including the dreaded mealy bug, are a source of great trouble and annoyance to many gardeners in those establishments where plants have to be grown in the vineries, but I think brighter times are in store for that class of men, and I believe they will have less cause for worry in keeping the Vines and Grapes free from mealy bug. I am thankful to say that bug never got a footing in vineries under my charge, but I have had trouble from it in plant houses, and of all the many insecticides in the market, I have only found one that will destroy this pest by fumigation, viz., the X L All Vaporising Fumigator. I saw a late vinery in which the Grapes were changing colour a few days ago that had just been fumigated with the above at double the strength recommended by the makers. So far as I could see, no injury had been done to the fruit or foliage, and the mealy bug lay in quantities dead on the paths, staging and elsewhere in the vinery, and after a careful examination of the Vines and plants, not a living bug could be discovered. Whether it would be safe to fumigate Vines bearing ripe Grapes is a matter that possibly some reader who has tried it may answer in the negative or otherwise.

Where all the Grapes have been cut out of the early vineries, much may now be done towards increasing the crop and size of bunch next year. If red spider or thrips has been prevalent, the leaves may be thoroughly syringed with a safe insecticide, afterwards giving plenty of clean, soft water overhead daily while the foliage remains green, and if the border is porous with free drainage, liquid manure can be given with decided advantage up to the time the foliage falls, and on some soils that are of a specially hungry character, such as the one I have to deal with, feeding after the leaves have fallen will prove highly serviceable. When the Vines have been cleared of their crop, I think it a great mistake to allow a fresh growth of sub-laterals to weaken the back buds and to some extent diminish the light they ought to have at this season. A few gardeners contend that by allowing this late growth, a supply of stored sap is acquired by the Vines, causing them to break strongly and more evenly when started again. Such a contention I question, as it is more probable that instead of stored sap there is a lot of wasted energy, and the Vines do not rest so soon or well as they ought to do if first-class results are to be obtained. W. G. C.

THE ROCK GARDEN.

XII.

The first half of July has been a time of brilliant sunshine, and though at present cloudy and rainy days prevail, the earliest part of the month was all that could be desired with regard to favourable weather for the rock garden. Mountain flowers, naturally, are not quite as abundant during July as they were in June, but among the plants blooming in July there is nevertheless a great number of beautiful kinds well worth the attention of those whose rock gardens, as a rule, are almost bare of flowers directly after the bright spring flowers have faded. Many plants mentioned in my previous notes as being in bloom during June are not only still in flower, but are even more gorgeous now than they were a month ago. Especially is this the case with Marliac's new Water Lilies, which flower most abundantly wherever planted. As I have already mentioned these in a previous article, I will pass no further comment on their exquisite beauty. I planted six varieties of the new Nymphæas in the rock garden at Abbotsbury, where they were covered by scarcely more than a foot of water. They have not only not suffered in the least during the last severe winter, but made splendid growth and have been flowering continuously since May, quite dispelling the erroneous assumption still frequently met with that Nymphæas should not be grown in water less than 6 feet deep. I may here also mention a few handsome plants growing not in, but near the water, which were in full bloom early in July. Parnassia palustris, with its white flowers on long stems, is an excellent companion to Saxifraga aizoides, with yellow flowers, as both flower at the same time, and love abundance of moisture and full exposure to the sun, while the deep yellow Saxifraga Hirculus and

the lovely Cypripedium spectabile love peaty soil and a half-shady position. Tall plants by the waterside blooming in July are the graceful Spiræas, S. palmata, S. p. alba, S. Ulmaria, S. U. picta, Astilbe rivularis, and also the effective purple Loosestrife (Lythrum Salicaria superbum), whose flowers form a capital contrast to the various yellow tints of the many Hemerocallis still in bloom.

Dwarf Rock Plants in Bloom During the Early Part of July.

The season for choice gems in the select part of the rock garden is by no means over. Some of the prettiest things out in bloom early in July were Acantholimon venustum, Dianthus Freyni, Potentilla nitida, P. n. atrorubens, Umbilicus spinosus, and Androsace Chamæjasme. Dianthus Freyni is a rare and beautiful Pink of dwarf and compact habit. Its flowers somewhat resemble those of Dianthus glacialis, but they are larger and the growth also is a little stronger than in that variety. It does well in a narrow fissure filled with calcareous soil, and has flowered abundantly at Exeter. Acantholimon venustum is also still rare, and not nearly so well known as it deserves to be. It is very different from and superior to the much better-known Acantholimon glumaceum. Its stiff prickly foliage is best compared to a minute Yucca, about 3 inches or 4 inches high, and bearing a spike of crimson flowers on an erect stem 6 inches to 8 inches high. Potentilla nitida with its carpet of silvery leaves and large white flowers is a most attractive plant. The white flowers often sport into a shade of pale pink or flesh colour, but all are eclipsed by the dark crimson variety, still rather rare and known as Potentilla nitida atrorubens. Of Primulas I noticed the following were in bloom early in July, and some of them are still flowering now. Primula Poissoni, P. magellanica, and P. capitata are all doing remarkably well in a half-shady position. P. Poissoni is similar to P. japonica in shape, but its rosy crimson flowers are borne on a shorter spike. P. magellanica is not unlike P. farinosa in its flowers, but the plant is more robust in all its parts, and being of the easiest cultivation is a very desirable plant for the rock garden. P. capitata is very striking with its heads of lilac-purple flowers on long erect stems, and is especially attractive when planted in large groups. The Gentians form another attractive feature in various rock gardens in this county, and especially at Exeter, where Gentiana cruciata, G. septemfida, G. Kesselringi, G. thibetica, G. decumbens and G. asclepiadea were flowering together early in July. Perhaps the most striking of the group is G. Kesselringi, with flowers of a much paler azure-blue than in most Gentians. G. decumbens, also, is of a paler hue than the semi-prostrate deep blue varieties cruciata and septemfida. G. thibetica is much taller and has a head of white flowers, which, however, seldom open profusely. G. asclepiadea is also rather tall, growing 1½ feet or 2 feet high and bearing numerous purplish blue flowers, produced from the axils of the leaves. These Gentians form an admirable succession to the spring-flowering varieties now past. Two excellent plants suitable for planting sideways into an abruptly sloping or vertical fissure are Carlina acaulis and Horminum pyrenaicum. The former has very large creamy white flowers and requires a sunny position, while the latter has a spike of purple flowers and does best in the shade in a position similar to that frequently recommended for Ramondia. Many of the Campanulas mentioned in my notes during June are still blooming profusely, but one of the dwarfest and choicest newly opened is C. Waldsteiniana, which is of very neat habit and well worthy of a place among the select plants. Of taller Campanulas still in bloom I will only mention C. Hendersoni, C. Burghalti and C. lactiflora, while those of medium size now blooming include C. Hosti, C. linifolia and C. Scheuchzeri, all of which make excellent rock plants if kept sufficiently far away from the smaller kinds of mountain plants. Haplocarpha Leichtlini, also, is still flowering profusely, and on a dry rocky ledge Opuntia Raffinesquiana is expanding its large yellow blossoms after having withstood the exceptionally hard frost of last winter. The pink-flowering Mesembryanthemum uncinatum has also survived and is covered with blossoms; while close by Silene Schafta is expanding its graceful shoots laden with bright crimson flowers. The deep blue Platycodon Mariesi is also now at its best, and as in winter it dies down altogether, it never looks so well as when planted in large groups and displayed on a carpet of dwarf Evergreen plants like Herniaria glabra or others that would cling closely to the ground.

Carpeting Plants Blooming Early in July.

I have often pointed out the importance of carpeting plants, not only for covering the ground between medium and tall sized plants, but also for being planted by themselves, falling over stones, often in places where no other form of vegetation would be equally effective. Lippia repens, though severely cut in some places by the frost, has survived the winter in Devonshire, and its pink flowers, just now nestling on dense greenery and clinging closely to the rock, are most attractive, as are also the white flowering Pratia angulata and the exquisite little Hypericum cuneatum, H. repens and H. nummularifolium, all with yellow flowers and of very neat habit. An excellent plant for quickly covering a stony ledge is Umbilicus chrysanthus. Like the Umbilicus spinosus already mentioned, its leaves form pretty rosettes, but are less incurved and without the spiny apex. Moreover, Umbilicus chrysanthus grows rapidly, while the other variety increases but very slowly. The flowers are pale yellow and appear here early in July, but on account of the pretty evergreen rosettes, the plant is an ornament to the rock garden throughout the year. It requires a dry, sunny position. Among the carpeting plants flowering in early July I would also mention a few varieties of Sedum. Even the common Sedum album is not to be despised in the rock garden, for its evergreen foliage and blush white flowers are most suitable for bold effects, and as it grows very rapidly, it should be allowed to cover a large patch of ground in places where quick growth is desirable, and where no harm can be done to choicer plants of slower growth. The same might be said of the yellow flowering varieties S. Bridgianum and S. Middendorfianum, but their dark foliage does not form so dense a carpet as that of the former. Sedum spurium forms an evergreen carpet studded with heads of pink flowers. Sedum crassifolium should be in every rock garden. All through the winter its very bright green glossy leaves were most ornamental, and when in July a mass of golden yellow flowers is added to the display, few things in the rock garden are more effective, especially for distant effect. Of other pretty carpeting plants flowering during early July I will only mention Convolvulus lineatus with silvery grey leaves and large pink flowers, Arenaria grandiflora with numerous white flowers, and Arenaria cæspitosa aurea with a dense carpet of golden yellow leaves studded with white flowers.

Medium-sized and Tall Plants Flowering during Early Part of July.

Among medium-sized plants suitable for prominent ledges in the bolder part of the rock garden I would mention the lavender-blue Statices, such as Statice elata, S. Gmelini, S. bellidifolia, S. spathulata, S. elata and the bold S. latifolia. A mass of the yellow Helenium pumilum might also be used with good effect, and not less striking are well-arranged groups of Lychnis Haageana with its large showy flowers in various shades of red and the beautifully fringed Lychnis Flos-cuculi plenissima. Very pretty, too, is a group of the dwarf yellow Solidago nana compacta contrasted against the mauve Erigeron alpinus, E. glaucus or the crimson-purple Prunella Webbiana and its white variety. The dark blue Delphinium cashmerianum and the pale yellow Scabiosa Webbiana form another good contrast. A very handsome plant of medium size is also the orange variety of the Welsh Poppy (Meconopsis cambrica), and in a moist half-shady spot Spigelia marilandica is conspicuous by its red, yellow-tipped blooms. A charming white flower is Anthemis macedonica. The fine specimen on Messrs. Veitch's rockwork at Exeter was killed by the severe frost, but the plant had seeded itself and the seedlings are already in bloom. Among tall plants in the background of rock gardens few things are more imposing than a good specimen of Centaurea macrocephala, with its bold foliage and large yellow flowers. Telekia cordifolia, another noble plant, is more in its place as a single specimen on Grass near the rock garden than among the rocks themselves. Romneya Coulteri, too, is now developing its large white flowers and doing well in a well-drained position at the foot of a large rock. Tropæolum speciosum is flowering most abundantly at Newton Abbot, where it covers a large rock.

In conclusion, I would mention a few effective tall plants very suitable for a border adjoining the rock garden: Liatris spicata, Chrysobactron Hookeri, Physostegia virginica, Coreopsis lanceolata, C. grandiflora, Cimicifuga racemosa, Heliopsis patula, Rudbeckia laciniata, Bocconia cordata, Harpalium rigidum, Lychnis vespertina alba fl.-pl., Eryngium Bourgati, E. giganteum, E. alpium maximum, Chrysanthemum filiforme, C. S. Sage, Monarda didyma, Aconitum pyrenaicum, Potentilla Hopwoodiana, Helenium striatum. All of these are among many others blooming early in July and most effective.

F. W. Meyer.

Exeter.

(To be continued.)

ORCHIDS.

NOTES ON PHALÆNOPSIDS.

These are still growing freely, and are apparently making a solid and satisfactory progress, the weeks of bright sunshine allowing of ample ventilation without lowering the temperature unduly. When one sees how well this free circulation of air suits the plants and notes the robust character of the foliage grown under these conditions, it seems hard to have to close the ventilators and practically to keep them so for several months. Yet this is what we must do later on in the season, and if the plants are to come through the ordeal safely they must have the best of attention now before any fall in the outside temperature occurs. With these beautiful Orchids all changes of temperature or other atmospheric conditions must be brought about gradually and naturally, and it is quite

time that the shading was diminished to a certain extent, leaving it up a little later in the morning and removing it earlier in the afternoon. Healthy well-grown Phalænopsids will stand more sunshine than is usually supposed, and at this season the blinds must not be kept down for five minutes longer than is absolutely necessary. I know well the difficulty too often experienced by Orchid growers, where, owing to the miscellaneous character of the plants grown in one house, it is impossible to give any one family the most suitable treatment; but these beautiful Moth Orchids seem to me to stand out from all others and claim a larger share of attention than any. With these there is no pseudo-bulb to finish up, as with a Dendrobe or Cattleya, nor a growth to complete like that of a Cypripedium, for as often as not the plants when going to rest have a leaf half made. Still, a watch must be kept on the plants notwithstanding, and an experienced grower will be quick to note the steadying, so to speak, of the growth which is precursory to resting. When this occurs he will know it is high time to slightly diminish the atmospheric moisture and allow a little more sunlight. It is at this season when the advantage of a broad spacious house, where ample ventilation can be given without drying up all the atmospheric moisture, will be apparent, and for Phalænopsids there is no comparison between the two styles of house. While not advocating a system of drying the plants at the roots, I always like to make them look for their moisture at this season and let them get a little on the dry side always before watering, and at least once a week to leave them a few hours quite dry. Some may be inclined to question the advisability of this, but I have practised it with such good results, even with small and weak plants, that I do not hesitate to recommend others to do so. Of course it is only a detail, and I do not wish to lay undue stress upon it, the chief point after all being to build up a firm and well-consolidated growth, foliage that will not disappoint us by falling off wholesale in winter and render the season's growth useless. The real importance of this will probably only be grasped by beginners after a season of ill-luck, when after growing them well, as they think, they find themselves at their wits' end to know what is the matter with their plants. Now, however, is the time to prevent this by avoiding exciting the growth, making the foliage soft and susceptible to changes of temperature, no matter how slight. Let the plants have their way and do not attempt to force them either to grow or rest, but observe them closely and take the precautions noticed above when seen to be necessary. In dull weather keep a little heat on the pipes to prevent a sudden drop in the temperature, but always make at least 5° difference in this between a fine and a dull day. The night air must be reduced unless the house stands at or about 65°, but it is not wise to let it rise much above this, especially with fire-heat. The house must be ventilated on top as soon as 70° is reached, and 5° above this must be the maximum now in dull weather, running up to 85° or 90° with sun-heat at mid-day.

H. R.

Dendrobium thyrsiflorum.—Several plants of this species have behaved in a rather singular way this season. They have produced a number of secondary spikes, but have not as yet started to grow. This I attribute to a slight check given the plants owing to removal, and partly also from being grown in too much heat, viz., with the warmest section of the genus. I have usually grown these with the Cattleyas, but from force of circumstances had to arrange them in a very warm house. I can think of no other reason for their doing so, as the plants appear quite healthy, and last season made a splendid growth.—R.

Cypripedium Sedeni candidulum.—This, one of Messrs. Veitch's hybrids, is a most charming kind and almost constantly in flower. A strong plant that had been flowering all through the late winter and spring months was cut over about three weeks ago, and now several more spikes are appearing in the last formed growths. The blossoms resemble those of the type, but are lighter in colour, this form having been raised by crossing C. longifolium with the white form of C. Schlimi.

Cattleya Eldorado virginalis.—This name is used to describe the albino form of this pretty Cattleya, which is now in flower. The sepals and petals are pure white, also the lip, the only colouring being a blotch of deep orange in the throat. The plant is a native of Rio Negro, and although not a very robust grower, it thrives well under ordinary Cattleya house treatment. It must not be over-potted and the compost should be free and open. It is also very suitable for basket treatment.

Warscewiczella Wendlandi.—The flowers of this charming Orchid are large and very attractive. Each measures upwards of 4 inches across and is pure white, excepting the purple blotch on the lip and a few markings on the crest. Having no pseudo-bulbs, this species requires very careful treatment, especially during the winter months, for the plants must be kept at rest and yet must not be over-dried. A thin compost (one that soon runs dry after being watered) is the best and preferable to block treatment, which is undoubtedly too poor for them. The plants soon show the effect of too little or too much water, the former causing the foliage to wither and drop off, the latter often tending to spotting and decay. I have found it thrive best in a shady corner of the Cattleya house.—R.

Phalænopsis violacea.—This very distinct and charming little species I recently saw in good condition. The blossoms were about 2 inches across, the sepals and petals light yellow at the ends, becoming towards the base a rich violet-rose. The lip is also purple with a yellow crest. The flowers last a long time in good condition and are very sweetly scented. It is a good grower, thriving well with the other species. The leaves are broadly lanceolate, about 9 inches in length, bright green. It is a native of the Malayan Archipelago, was introduced in 1861, and has several well-marked varieties.—R.

Aerides quinquevulnerum.—This superb Aerides resembles A. odoratum, but is easily distinguished by the five segments having a purple blotch on each of them, it being from this circumstance that it obtained the specific name. The fragrant and pretty blossoms are produced at various times, but usually towards the end of summer, and last a considerable time in full beauty if not wetted or bruised. It is a strong grower, thriving well in pots or baskets, in Sphagnum Moss and charcoal. The best time to repot is early in spring, just before growth commences, and when giving fresh compost it is just as well to give as much room as the plants will require for three years at least, as they dislike disturbance at the root. I like to grow these plants in the ordinary flower-pots of a suitable size, as when the time comes to repot one has only to carefully break them, and the roots may go into the new ones almost entire. None of these large-growing, distichous-leaved Orchids like to be crowded in the houses; each plant should stand well clear of its neighbour, and the larger and more spacious the house, the better the plants will thrive. The atmosphere must be kept moist and charged with ammonia, and the plants must not be dried at the roots at any time. A. quinquevulnerum is a native of the Philippine Islands and Manilla, having been introduced in 1838.

Cattleya crispa.—This species was introduced from Brazil to our gardens some sixty years ago, but although very beautiful, and particularly useful as an autumn bloomer, its merits appear to have been completely ignored in the race for novelties. It would be well if fine forms of this plant were searched for; it not only greatly resembles Lælia purpurata in growth, but it may with justice be called the autumn-flowering purpurata. It requires a severe, but judicious rest to induce it to flower freely.

DISA GRANDIFLORA.

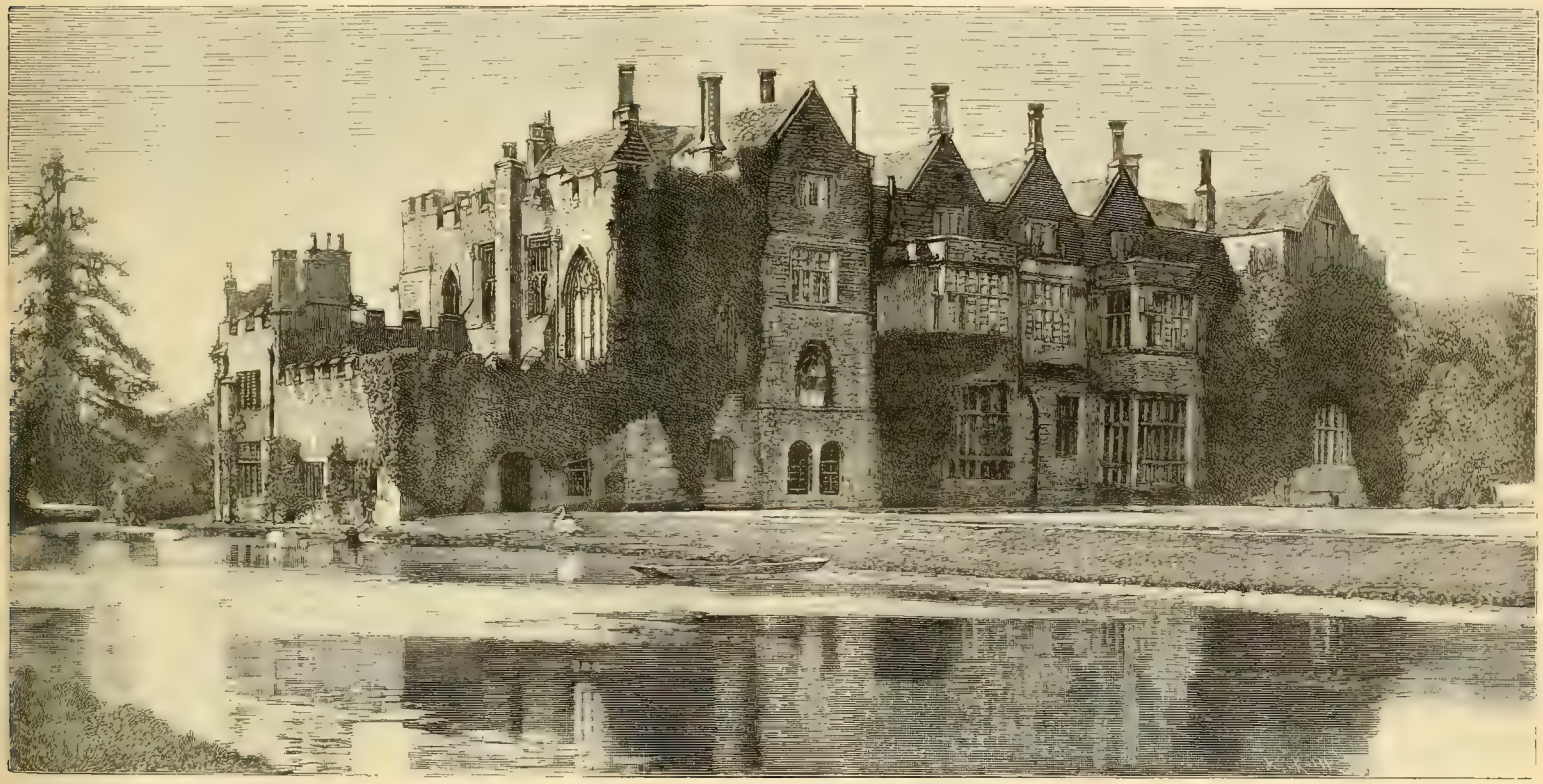
This Orchid is now in flower in many collections, and the beauty of its blossoms depends very much upon how the plants have been grown, weakly growths infested with red spider or thrips never throwing well-coloured or large flowers. On the other hand, if the growth is robust and clean, it is one of the most effective Orchids in existence, no other, excepting perhaps Sophronitis, making such a rich display of scarlet or brilliant red. In a great many places D. grandiflora is quite a failure, not because of any lack of attention, but simply because it is not kept cool and moist enough. While growing freely, the amount of moisture required at the root and in the atmosphere is surprising, and nothing but repeated syringings overhead will keep the foliage clean and healthy. As soon as the flowers are past the plants may with advantage be placed either out of doors or in a cool frame without any protection, unless it is from the very heaviest rains, light showers being of great benefit to the plants. This will suit them well until the foliage and stems are thoroughly hardened, when they may be repotted and replaced in the cool house. The best compost is equal parts of peat fibre, loam fibre, and Sphagnum Moss, to which add a good sprinkling of finely broken crocks. The pots or pans should be those with perforated sides, these allowing the offshoots to come to light. After repotting, a great deal of care will be needed in watering until the roots begin to run freely, but by the middle of winter the plants will usually be growing, when the supply must be increased, until in March or April and from then until flowering time the plants must be watered as described above. The winter temperature must never go below 45° and a few degrees higher must be allowed as soon as the growths appear above the compost. During the summer keep them as cool as possible and always allow a current of air about the leaves, no matter if they are blown about by the wind—in fact, the growth will be all the stronger for it, provided always the moisture is ample. They must be kept shaded, and with regard to insects prevention is much better than cure. If red spider and thrips once obtain a firm footing it is almost impossible to eradicate them, spongings, repeated at short intervals, at the same time immersing the plant, roots and all in water, being the most likely means to accomplish this. Green-fly sometimes puts in an appearance and must also be checked at once, for if allowed about the flower-spikes the blossoms will be ruined. D. grandiflora grows about a foot high, has erect stems clothed with narrow green leaves from top to bottom, and bears at the apex a raceme of about four or five of the beautiful richly-coloured flowers. These are about 4 inches across, the hooded upper sepal being bright rose with deep carmine veins, the side sepals being brilliant crimson in some varieties, in others more of a carmine shade. In its native habitat this Orchid grows in boggy, very moist places, yet at a good elevation where at times it is very cold. Here the stems grow to a height of 3 feet and upwards and bear spikes with upwards of a dozen flowers. It was introduced from Table Mountain, near Cape Town, in 1825. The variety superba is a stronger growing and very large flowering form of the type.

R.

BROUGHTON CASTLE.

This delightful old place, belonging to Lord Saye and Sele, but at the present tenanted by Mr. H. F. Gladwin, is situated about two miles from Banbury, in a beautifully wooded and well-watered valley. A pleasant road leads to it from the town of Banbury, which also nestles in a valley, and although there is a gradual ascent on the way, two parallel and continuous hills entirely shut out all view of the country beyond. Broughton is a little village that apparently has existed, but not extended, for many years. The visitor coming from Banbury sees first a few cottages and the school, all stone-built and stone-roofed structures, grey with age, and, passing the ancient and beautiful church, the castle is seen standing back a little way from the public road, a meadow intervening. It is a fine, imposing structure, like most houses of its time, great in architectural beauty, and in a perfect state of preservation. In appearance it represents a fine Elizabethan mansion, and there is every probability that this building has been built out of one that preceded it. There are parts of a much earlier date known to have been erected in 1407, and with the surrounding moat it most likely was a stronghold of considerable importance in the time of the Plantagenets, whilst later on we read of an important gathering in the council room of those who were opposed to the arbitrary policy of Charles I. previous to the assembling of the Long Parliament.

The illustration shows the carriage front, the moat being spanned by a little bridge, the road passing through a strong castellated gateway. The other portion of the house seen in the picture has the water within a few feet of its walls, but on the opposite side there is a pleasant breadth of green turf, and beyond the moat the ground rises, prettily undulated and diversified with groups or isolated specimens of Oaks, Elms and other native trees all of large size. Proceeding round the house we come to some very old walls that encompass what was apparently once a courtyard on its fourth side and the walls being loop-holed denote great antiquity. This spot is now a little lawn with two or three simple beds of Asters and Zinnias, and a border several feet wide runs round between the grass and the wall, filled, as is fitting, with hardy old-fashioned flowers, among which Pæonies, Day Lilies, Delphiniums and Phloxes were most prominent in strong clumps. The ancient walls are covered with Ivy on one side and fruit trees on the other. At the end furthest from the house there rises a little spring of water as clear as crystal. A few steps lead to it, and a rich bank of hardy Ferns at the spot is charming in association with the water. Ivy has long mantled the ancient walls of the house, but is now varied and relieved by the Virginian Creeper, also of great size. One could imagine no more peaceful spot than this to make a fine flower garden of the permanent and artistic kind, with large and simple beds of flowers set in the rich grass of this verdant valley, and the water a gay garden, too, the new hardy Lilies its chief feature. There is a good walled kitchen garden, well cropped and ably managed by Mr. Cooling (the gardener), and several glass structures are devoted to Grapes and Peaches.



Broughton Castle, Oxford. Engraved for The Garden *from a photograph by the late Mr. J. L. Robinson, C.E., Dublin.*

Collomia grandiflora.—The old Collomia coccinea, once a popular garden annual, has given place to more showy flowers and is now rarely seen. The species now under notice has much in common with C. coccinea, but differs in being perennial, whilst it is also rarely seen. Mr. Perry is growing it at Winchmore Hill, his stock being from plants he found in an old Cambridgeshire garden where it was grown and supposed to be an Epilobium. The leaves are of a glistening green colour, and the flowers, of a distinct shade of salmon-red, are borne in a dense, clammy, crowded head.

Flower Garden.

NOTES FROM WARLEY PLACE.

The rock garden with its rich collection of alpine plants is the feature of Miss Willmott's lovely garden at Warley Place, and a very good description of it and the many gems that are growing there was given in The Garden for March 3, 1894. Since that time, however, very great additions have been made, and its extent and interest enormously increased by continuing it down to the little lake, following much the same plan as that of the earlier work. A little stream runs down the centre, here and there broadening out into a pretty pool where the new hardy Water Lilies and other choice aquatic plants have already been planted. At its lower extremity, cunningly combined and constructed so as to form part of the rock garden, yet with a flat roof of glass overhead, and with closed ends, a house has been made and planted entirely with Filmy Ferns in variety. Many of them already show signs of doing well, and without a doubt ere long this cleverly arranged home for them will be a most beautiful spot, and its charms the greater because of its unobtrusive character, as one has not the least idea of the existence of the structure till it is entered. The new portions of this rock garden are already so well clothed, one hardly credits the fact that it was only made last winter.

There are many other nice flowers at Warley Place besides those that want a rock garden; in fact, they have grown so much in numbers that they promise to fill the ground that was formerly devoted to bush fruits and vegetables; conse-

quently, a new kitchen garden has been made. Of the best hardy flowers there are mixed borders that must have been devoted to them many years, judging by the great spreading standard specimens of such Roses as Gloire de Dijon, Rêve d'Or, Homère and other varieties. A little garden of Tea Roses occupies one nook on the lawn, each bed filled with one fine kind and carpeted with a choice tufted Pansy. Carnations are very well grown and were gay when we saw them, especially the beds of Ketton Rose, Raby, Gloire de Nancy, Mrs. Muir, and others. Herbaceous Phloxes were splendid, and there is no finer family than this to help keep the garden gay till the autumn hosts of flowers appear. Large beds are devoted to English and Spanish Irises, and a bed of Persian Ranunculus was suggestive of spring, with its profusion of bloom—the result of deferring planting till spring. Along the front of a range of vineries, and apparently in the gravel of the path itself, the Portulaca flourishes and makes a brilliant display, sowing itself and reappearing year after year. Some soil was put there in the first place and surfaced again with gravel, whilst the front wall of the vineries reflecting light and heat is congenial. In the plant houses also one may see much that is uncommon and beautiful. Scented Pelargoniums are favourite plants, and the collection of these is a large one. A little house devoted to Ferns is very charming, the back wall being entirely hidden with Maiden-hair, the front, ends and main rafters concealed by Ficus repens. The stove furnishes a home for many climbing plants of great beauty, among which we noted Ipomæa Leari, Gloriosa superba in fine bloom, the double crimson Hibiscus, bearing many large flowers, Aristolochia elegans, with many quaintly marked flowers, and Oxera pulchella. A noble specimen of Nepenthes Mastersiana with grand pitchers was seen in this house, also Rondeletia speciosa major in profuse bloom. Rochea falcata, an old garden plant of the succulent tribe, is well grown. It is a striking plant when bearing its large heads of scarlet flowers and is easily grown in a greenhouse.

Verbascum Chaixi.—Reference is made to this Mullein on p. 15. It is truly a handsome plant when growing vigorously. For years a plant of it has been growing amongst Rhododendrons, and it annually sends up flower-stems 8 feet high. In this particular spot the soil is heavy and retentive of moisture, hence the extreme vigour of the Verbascum.—E. M.

Water Lilies in hard water.—Referring to the article on page 52, I wish to know if hard water is prejudicial to these lovely flowers. I have a pool which never freezes in the hardest winter. Some years since I planted Nymphæa alba, but it dwindled and soon died. I afterwards planted several of Mons. Marliac's beautiful varieties; these exist, but do not produce either good leaves or any flowers. The pool is fed by an adjacent spring which contains much lime. Is this the cause of my non-success? The water does not affect Lythrum salicaria, several species of Osmunda, and Lastrea thelypteris, all of which thrive.—R. Milne-Redhead, *Holden Clough, Clitheroe.*

Pansies and the drought.—We often hear from our friends, especially in the south of England, that they do not attempt flower garden decoration by growing Pansies therein, by reason of their being so liable to succumb to heat and drought. I think where the soil is deep, in good condition, and judicious mulching applied, there need be no fear of lack of flowers from Pansies from April to October. The past season, from May well into July, has been one of the driest on record, and never have I seen Pansies do better, and likely to continue doing well. Such sorts as the Countess of Hopetoun, Golden Sovereign, and numerous blues and purples are at the end of July beautiful, and only coming to their best. The Pansies and Violas are every year becoming more popular in Scottish gardens, their easy management and free-flowering rendering them welcome in the garden of the humble cottager, as well as in the gay parterres and extensive borders of the rich. Preparation of the soil as indicated I have found meet every want in the south of England—M. Temple, *Carron, N.B.*

SEASONABLE NOTES ON BULBOUS PLANTS.

The most important work among bulbs at the present time is that of lifting and drying them prior to replanting them. With some species and genera the annual lifting of the bulbs is most important—indeed, essential to keep them in health. But even here again one cannot recommend any hard-and-fast rule, for the soils of gardens vary so much, and equally variable are other circumstances under which plants either thrive or merely exist. Take two extremes of soil, for instance, one of a fine dry, sandy nature, in summer hot and parched, the other a stubborn, cold, retentive clay, which in summer hardens and shrinks with the intense heat. Either of these extremes of soil is, of course, unsuitable to the successful cultivation of many bulbous plants, and must in a greater or less degree be made suitable for the plants intended to occupy it hereafter. I mention these extremes of soil merely to show how difficult it is to lay down decisive rules for guidance, and it is in this connection also that we must decide whether the majority of bulbs are benefited by annual lifting or otherwise. Naturally the bulbs would be much safer in a soil of a sandy nature even in a wet season than would be the case if the soil were heavy. But whatever the soil may be, I think we may safely take it as a guide to all our operations in bulb-lifting that the majority in a season which is both wet and cold are decidedly benefited in the long run by the absolute rest they receive through being lifted. I say benefited advisedly, because the lifting and drying, particularly where the latter is unduly prolonged, by no means tend to the vigour of the plant at the moment. As a proof of this I may mention three well-known kinds which are decidedly more vigorous when left in the soil for two or three seasons in succession. The kinds referred to are Emperor, Empress, and Grandee, three of the most vigorous of all Daffodils when established. The soil of Hampton is especially well suited to these kinds, as may be imagined when I say that the foliage of the first named will attain to a height of upwards of 2½ feet and nearly 1½ inches broad. This is usually the case with bulbs of the first size left undisturbed for two years. But these identical bulbs lifted and replanted after, say, six weeks' rest would lose at least quite 1 foot of this length of foliage in the year following the planting. This does not, however, appear to represent diminished strength all round, but affects the stature of the plant more directly, since the foliage has the same robustness, though minus the length; so that in a year like the present such kinds as appear in full vigour may be left alone, unless necessity arises for dividing the established clumps. Maximus is another fine kind that may in well-drained soils be left for even three years without disturbance; indeed, my experience of it is that it flowers with greater certainty when left alone than when lifted periodically. Supposing, for instance, the amateur may not have time at disposal for the lifting of these bulbs at the necessary moment, it would be quite an easy matter if these were planted as clumps, by placing a handlight over them to give them a thorough season of rest. In the case of maximus, for instance, such a rest would prove highly beneficial in a cold or rainy season, while the same remark would hold good with cernuus and other of the white trumpet kinds. I have never tried it, but possibly a similar course of treatment with Emperor in the third year of planting may provide a rest at once beneficial, without diminishing the stature of the plant, as does lifting it. There are other kinds again, notably Ard-Righ, obvallaris, Mary Anderson, many of the spurius section, and cernuus and its varieties, for which annual lifting and drying seem the only way to keep them in good health. These kinds and many others, as experience and individual circumstances appear to dictate, should be lifted early each year. It will always well repay the amateur to make note each spring of any that have traces of

Disease

early noticeable in the foliage. These kinds, whatever they be, will need attention at the lifting season apart from digging them out of the soil. Upon examination it is not unlikely that these bulbs will be found infested more or less with mites, that secrete themselves beneath the outer skins and there carry out their mischievous and oftentimes destructive work. Such bulbs will need to have the old skins removed and burnt without delay. I am strongly of opinion—which is only strengthened by continued observation—that we pay far too little regard to the root pests of bulbous plants. Anything affecting the leaves and stems attracts attention because they are constantly before us, but the bulbs being in the soil for the greater part of the year, we have not the same opportunity for investigation. And then again these insects that infest bulbous plants are so minute, that they really need searching for. Once they have bored into the bulb it is quite an easy matter to carry on their work of destruction, and the more so because of the colourless nature of their bodies. I have repeatedly found these insects present on bulbs apparently healthy—so much so, in fact, that roots, leaves, and flowers have all been put forth in perfection. With badly diseased stocks, and of the more abundant kinds, it would perhaps be easier to secure a fresh lot, but with the choicer varieties they repay cleaning. When the bulbs are lifted, some discoloration may be noticeable beneath the skin, and this when the outer coats are quite sound. These discoloured skins are frequently quite wet with decaying moisture, and a source of danger if allowed to remain. In such cases no time should be lost in cleaning and removing these decaying portions, even though the bulb may be for the time disfigured. But if the base is still sound, the removal of some of the coats of the bulb will not harm them, and a return to a more healthy state may reasonably be expected. Any such bulbs, after taking away all decay, should be placed in open boxes or trays and be fully exposed to the sun. Never under any pretence place the freshly-dug bulbs in boxes with lids or covers, as it is fatal to them. Some years since a large grower of bulbs adopted this method, and to make matters worse the boxes were arranged on top of each other in a badly ventilated cellar. The result was disastrous in the extreme; many hundreds of very fine bulbs, unfortunately of the choicest kinds, sweated and were hopelessly ruined. A most remarkable circumstance in connection with this was that for several years any bulbs put into the place turned black in a few days.

It cannot, therefore, be too widely known that a full and free circulation of air must be admitted to all bulbous plants when out of the soil. More than once I have considerably resuscitated diseased bulbs of the Tenby Daffodil by cleaning and exposing to the full influence of wind, sun, and rain, and turning over occasionally, so that all sides may be reached. As in many other things, it is easier to keep such things in health by certain cultural methods than it is to recover them when once diseased. A very stubborn form of disease in the kind just named is a brown rusty excrescence, which forms over the entire basal part. It appears to be always dry, slightly warty in appearance, and, hermetically sealing the base, prevents the roots pushing forth. The result is inevitable, though with good sized bulbs it may take several years before they are quite exhausted. The only remedy is to cut clean away any part affected as soon as seen.

The English and Spanish Irises should be lifted without delay, cleaned and properly dried, storing them for the time being in any open shed or outhouse secure from rain. In fact, a similar routine may be followed with these as with the majority of the Narcissi, so far as lifting and drying are concerned. E. J.

Lilium candidum.--In a strong soil I cannot get a single bloom of this Lily in a wet season, but in a dry one I have a fine display, as there are fully fifty large clumps of it growing in the herbaceous border. I am inclined to think that if we were to plant the bulbs in well prepared stations 2 feet square, completely removing all the natural soil, and filling up the space with peat and leaves, first putting in some drainage, we should hear less of the disease which is so troublesome.—E. M.

Hemerocallis Kwanso foliis variegatis.—In Mr. Franklyn's garden at Shedfield, where the soil is sandy, this Hemerocallis succeeds admirably without any protection whatever during the winter. If it were only for its foliage it would deserve a place in any garden, but, fortunately, the flowers are interesting, although not quite of the colour one cares to see over silver variegated leaves.—E. M.

New Gladiolus hybrids.—On page 69 you give a description of G. Dutrieul de Rhins from the garden of Burford Lodge, Dorking, the residence of Sir Trevor Lawrence, Bart. I saw it growing at Burford Lodge, one of a number of new French and American varieties which, under Mr. Bain's skilful treatment, have made a very vigorous growth, and will no doubt presently present to view some very fine things. One of the new Lemoinei types is Col. Humbert, reddish rose, with a dark centre, also very fine. Anyone who has a fancy for the newer hybrids will find Mr. Bain's collection well worth a visit, and they are so well grown that they cannot fail to produce very fine spikes.—R. D.



Rhododendron arboreum. (*See p.* 103.)

Lilium Krameri.—This lovely Lily generally shows much variation in colour in shades of pink and rose, but two distinct forms are flowering with Mr. Perry at Winchmore Hill. One has pure white flowers, while those of the other are of the deepest shade of rose, almost crimson in fact.

Salpiglossis grandiflora.—For brilliancy of colour, variety of tint and marking, and size and striking effect, Salpiglossis may be fitly designated "the Orchids of the hardy annuals." The members of the National Chrysanthemum Society who joined in the visit to Sir Trevor Lawrence's residence at Burford Lodge on the 22nd ult. saw a large bed of Salpiglossis grandiflora, which represented the latest outcomes of variety and quality. There were shades of maroon and deep violet-blue, and, on the other hand, pale yellow and cream, and between these two many brilliant combinations. It can scarcely be said there are any true self colours, for diversity of marking is seen on all, but some more nearly approach the self character than others, while some are very handsomely striped and flaked. Orange, salmon, cerise, violet and other striking tints are seen in unusual connection, and as the flowers are large and very freely produced, the effect is grand. Seeds were sown in spring and the plants put out in the open to bloom; they get into flower early and last for a long time. There is no other annual which makes such a striking effect when bunched as does the Salpiglossis, and now that a class for bunches of hardy annuals finds a place in most schedules of prizes of exhibitions held at the end of July and early in August, the Salpiglossis should be one of the first to be grown for the purpose. We owe a debt of gratitude to the Continental florists for the remarkable improvements made in the Salpiglossis, and it is not too much to say it is a flower which should find a place in every garden. Sowings may be made at the end of February and early in March for transplanting to the open, and to do a good strain full justice the ground should be in good condition.—R. D.

Anemones in July and August.—It may not be generally known that many of the beautiful spring-flowering Anemones, if kept out of the ground until late in the season, will grow and flower well through July and August. The other day I saw a beautiful gathering of these lovely flowers in a florist's shop in this neighbourhood, and, on expressing my surprise, was informed by the grower that the roots were not planted till the end of May, and that he had a batch of plants of the old scarlet Anemone fulgens coming on that would afford him a succession of bloom through August. The Ranunculus may be successfully treated in the same way if a succession of flower is desired. The great point to be observed is keeping the roots dry. If stored in a damp place they quickly become mouldy and spoil. There are few subjects that will stand being out of the ground in a dried state so long and yet retain their vitality.—J. C.

PHLOXES AT CHISWICK.

The trial of Phloxes in the R.H.S. Gardens at Chiswick this year is an extensive one, comprising contributions from most of the leading growers. Although the hot dry season has been unfavourable to strong growth, especially to plants not thoroughly established as these, there is plenty of good strong growths carrying fine trusses. Some of the most distinct early-flowering varieties are selected and described below, but another later inspection of the collection will be made in order to make a further selection from those not yet in bloom. Magnet is a fine Phlox, with a large branching truss of carmine-red flowers. It is a dwarf grower, likewise G. W. Collock, with a compact truss of small neat flowers, which are crimson and very effective. Lafayette is a taller growing variety of branching habit, with fine flowers in large trusses, in colour a delicate blush-mauve with rosy eye. John Anderson, a deep rose self, is fine, and Mme. Hoste, a beautiful white variety which shades to blush with age. Purest of All, as the name would imply, is pure white, dwarf in habit, but robust and free in bloom. John Forbes has large flowers and trusses, and is of a soft pink shade with a deep rosy eye, whilst Albert Crousse in vermillion-red is most brilliant and striking in colour. General Chauver, somewhat similar to the preceding, is also a first-rate and beautiful Phlox. General Faidherbe has deep rose flowers of fine size and borne in profusion, and Earl of Mar in rich self crimson is well worthy of note. Miss Alice Anderson has flowers of a delicate light pink hue, deepening into rose in the centre, whilst Avalanche is another first-

rate white-flowered variety. Regalis is a rich, bright rose self, and Matador in vermillion-red is large and conspicuously bright. W. Robinson in salmon-rose is about the best of its colour, large both in the flower and truss; whilst other noteworthy varieties are Eugène Danzanvilliers, pale lilac with white centre, a most distinct shade of colour; Adonis, bright salmon-rose; and Pont Riquet, dark crimson-purple.

We have purposely selected varieties of clear and decided colours such as will look well and be effective in the garden. For some reason or other we rarely see this superb hardy flower well grown in private gardens, but it is deserving of better attention.

CHRISTMAS ROSES IN SURREY.

I fancy that many besides myself will have been surprised to read Mr. Burbidge's statement that Helleborus maximus will thrive under rough and ready treatment better than any other member of the family. I have heard many express regret that whilst the common H. niger or H. major did satisfactorily, H. maximus never flourished with sufficient vigour to show its true character. In some gardens naturally favourable to the family, H. maximus will grow as freely as the typical form, but these places are few and far between. As Mr. Burbidge observes, it is the strongest growing of Christmas Roses, but in light soils that get parched in summer and in exposed positions the foliage turns yellow and the plants become so weak, that they produce blooms very little superior to those of the common H. niger. This is the condition in which I have most frequently seen maximus in Surrey gardens, where the soil in a general way is of a light description and easily parts with moisture. Several years ago I made a plantation of Christmas Roses consisting of maximus, major, angustifolius, Riverstoni, ruber and caucasicus. I am in the unfortunate position of having no naturally shaded situation, and the plants were set out in the full sun. I thought that by giving good attention to watering I should induce them to flourish, but I was mistaken. In spite of all I could do they would not grow with sufficient freedom to allow of producing flowers in quantity. Each spring they started freely into growth, but in July or early in August, just when the crowns should be plumping up, the greater portion of the leaves took on a yellow tinge, and in the course of the winter the plants were to a more or less extent defoliated. Of the varieties above mentioned maximus suffered most, and, judging from my own experience and from what I have seen elsewhere, I have come to the conclusion that if one wishes to see this grand Christmas Rose in true form, it must, in the great majority of gardens at least, get good culture. It is one of those hardy flowers that under suitable conditions grows with remarkable vigour, but unless these can be accorded it, it is hardly worth planting. On light soil and in the southern counties a certain amount of shade is, I am convinced, indispensable, and good drainage is absolutely necessary. The roots of maximus are even more fleshy than those of other varieties, and consequently suffer more from stagnant moisture in the winter-time. Of all the Christmas Roses I am acquainted with caucasicus is the one I should recommend for growing in a rough and ready manner. This is the only one that has given fair results with me when placed in full exposure. Mr. Burbidge does not mention it, and I have remarked that it has very rarely been mentioned by those who have written about Christmas Roses in The Garden. I am surprised at this apparent want of appreciation of a Christmas Rose that is possessed of exceptional powers of endurance. The foliage is very rich in colour, the growth is vigorous, the flowers are thrown up well, and are produced in profusion. Under very trying circumstances H. caucasicus will retain its foliage, remaining in good condition when maximus and major have lost all their leaves. In pots this Christmas Rose does remarkably well. I have had plants of it that remained in the same pots for years and bloomed with freedom annually. Mr. Burbidge refers to ruber or Apple Blossom as being a variety of maximus. In habit of growth they resemble each other to some extent, and the pink tint that distinguishes maximus is even more pronounced in Apple Blossom, but the time of blooming is quite different. Maximus will often open its first blooms in October, whilst Apple Blossom rarely expands them till January. I believe I am correct in saying that maximus never yields seed in this country, so that I fail to see how it can have given birth to a variety that is, moreover, as regards time of blooming, quite distinct from it. I imagine that the variety Apple Blossom turned up in a lot of imported plants, probably from the Italian Alps. It may, however, be a hybrid, for although maximus does not seed, its pollen may be potent when placed on other kinds. I have some seedlings which by their leafage seem to show that maximus may have been one of the parents. Several years ago I made crosses with all the varieties above mentioned and raised some 1500 seedlings. These showed considerable diversity of form and colour in the leaves, but, unfortunately, the heat and drought of 1893 were too much for them, and I lost the greater portion just as they were coming into blooming condition. In making these crosses I used the pollen of maximus, but, very few of the seedlings having bloomed, I cannot say if it had any potency. There is one cross that gives an excellent Christmas Rose, *i.e.*, angustifolius with caucasicus, the latter being the seed-bearer. The habit of this hybrid form is remarkably vigorous, the leaves being rich in colour and of great substance, which enables them to resist parching heat. The blooms are thrown up on long stalks and vary a little in form. Riverstoni is a fine Christmas Rose, and I believe it to be a garden hybrid. I have plants which as regards leafage, habit of growth and flower appear to me to be identical with it, and they came from crossing caucasicus with major. The common niger varies considerably in form of leaf, colour, and profusion of bloom, as one may easily see when raising it in quantity from imported seeds. A good form of it is, I consider, as useful as major, which is preferred by those who grow for profit, and is certainly better adapted for ordinary garden culture than that variety, owing to the tougher nature of the leaves. J. C. B.

Begonia Emperor.—Great strides have taken place among tuberous-rooted Begonias within the last twenty years. Many of the varieties then popular are now quite forgotten, but one of them—Emperor—is employed for bedding in Hyde Park; and though there are many beds of the larger and rounder-flowered class, yet this old variety was by far the best of any when seen on July 28—a day of continuous rain. The older forms, and Emperor among them, are taller in growth than the newer kinds, whose flowers, being larger and heavier, were weighed down with the wet, and were consequently but little seen, while the narrower-petalled flowers of Emperor were in no way affected. The flowers of this are of a bright vermillion. Emperor was raised by Messrs. Veitch and received a first-class certificate in 1875, but was not put into commerce till two years later. It was raised at a time when the parentage of the different varieties was given, that of Emperor being announced as Clarkei × Chelsoni. The former of these—Clarkei—was imported by Messrs. E. G. Henderson and Son from Peru, and flowered with Colonel Clarke at Welton Place, Daventry, in 1867; while the other, Chelsoni, was obtained by crossing B. boliviensis with the hybrid form Sedeni, remarkable from the fact that it was the first hybrid tuberous Begonia raised in this country, its parents being B. boliviensis crossed with an unnamed species.—H. P.

The seed harvest.—Now is a good time to look after the ripe or ripening seeds of all good hardy flowers. By gathering the best seeds of such plants as Poppies, Honesty, white Foxgloves, Scillas, Chionodoxas, Narcissi or Primroses, and sowing them at once in half-wild places now that the earth is warm and moist after the rain, the bounty and the beauty of the garden may be made to overflow into the woods and walksides, the fringes of carriage-drives, or even into the hedges near one's home. The sowing of seeds and the rooting of cuttings or layers almost continually are among the most important of all operations in good gardens. To the private landscape gardener especially is this necessary, since he or she must always have at command a good stock of healthy young stock for the finest groups and masses. I was in an old country garden the other day where the masses of Foxgloves, blue Delphiniums, Alstrœmerias and crimson Poppies were splendid, as seen blooming in bold groups where sown. Common Honesty and Hesperis matronalis I saw lovely this last spring fringing a mile or so of a grassy wood path, along which the seeds had been scattered two years ago, and white Foxgloves and Welsh Poppies sown last season promise to rival the crucifers next year.—F. W. B.

FLOWER GARDEN NOTES.

Carnations.—Information as to the way in which individual varieties of Carnations came through the winter of 1894-5 would be very interesting, in the open ground I mean, not wintered in frames. There is no doubt in the majority of places Carnations in the open ground were hard hit last winter, but I cannot rightly understand why it should be so unless some varieties are much more tender than others, and the really hardy sorts could be counted on, say, ten fingers. The situation would not seem to have much to do with it, or why are failures reported alike from high and dry and from damp, low-lying districts? Indifferent plants are often answerable for failures, it being simply impossible to expect plants to come safely through a severe winter if when required for planting out they are only just beginning to root. A hardy constitution should be one of the first considerations in choosing varieties of border Carnations, coupled with free-flowering properties and non-splitting. As a considerably increased number of Carnations is to be grown, I have already started layering, the object being to secure a batch of nearly 2000 plants for a new bed. The bed will be cut out on turf on a poor lawn, and in order to give the plants a start I shall bastard-trench it, working in a liberal dose of well-decomposed manure on the top of the first spit. We are starting our layering with Countess of Paris and Ketton Rose, two varieties that root somewhat slowly, and consequently are longer growing into good plants. The grass on all members of the Clove section is very strong and succulent—a fact that is rather surprising when one considers the length of time the beds lacked even a little moisture, and at once stamps the Carnation as a capital dry-weather plant. In a season like the present there is no doubt one is greatly indebted to a careful preparation of the beds prior to autumn planting, and also a good surface mulching put on, if not in winter at least early enough in spring before the sun gets sufficient power to dry out the ground.

Tufted Pansies.—It has been a capital time for the propagation of tufted Pansies. The rain

came the day after the first batch was inserted, and they have been kept damp ever since by occasional showers. I fancy we shall have a good strike, despite the fact that the cuttings were none of the best; in fact, the majority are on the safe side, as is evinced by the fact that the very small flower-buds that were not removed when the cuttings were taken are now opening. It was not possible to get sufficient cuttings of several varieties, and in order to secure the amount required we shall either have to split up the old stock in the autumn or take later cuttings; probably the former, as late insertion is not satisfactory. No plants have benefited more from the rain than these Pansies; they were beginning to look very shabby in our light dry soil, but the soaking received, accompanied by a thorough clearing away of all dead flowers, has quite transformed the beds. A recent note in The Garden, calling attention to the splendid summer display afforded by tufted Pansies associated with Fuchsias, was very appropriate. No better beds are to be found anywhere than those filled in this manner, the three necessaries being well-grown plants of free-flowering varieties of Fuchsia, thin planting of the same to show them off to the best advantage, and a happy arrangement of colours. All the purple, dark mauve and purple and white or purple and mauve Violas, as represented by Purple King, J. B. Riding, Edina and Iona, also the rose-coloured William Niel, look remarkably well with Mme. Cornelissen Fuchsia, an old variety, but still one of the best for this purpose; whilst darker Fuchsias would naturally be carpeted with white or light-shaded Violas, White Swan and Lilias being two of the best.

New herbaceous plants.—Perhaps rare would be a better word than new, as one or two things mentioned below have been out several years. I have, however, ventured to call attention to them owing to the fact that as yet they seem to be comparatively unknown even in many places where herbaceous plants are largely grown. Let me again recommend Achillea ptarmica The Pearl as a first-class thing alike for the border and for furnishing an abundance of lasting white flowers. The extra vigour of the plant as contrasted with the ordinary double form of ptarmica is quite in proportion to the extra size of the flowers, and the growth must either be pegged or it must be planted well in the centre or a little towards the back of the border. It increases readily by division of the crowns in autumn. Platycodon or Campanula Mariesi is a very fine front row plant, producing flowers of a very pleasing shade of blue, often nearly 3 inches in diameter; this is one of the best of the dwarf Bellflowers. Tiarella cordifolia is another charming plant of comparatively dwarf habit that, planted in blocks along the front of borders, has a very striking appearance; seen in the distance it looks almost like a miniature Bocconia cordata. This again, although an old plant, is by no means so well known as its merits deserve; it is fine for the back of large borders or to face shrubberies, and comes in very acceptable in a cut state for all vases. In scarlet shades the double form of Lychnis chalcedonica is a long way before the single variety, lasting so much better either in the border or in a cut state. A plant I have tried this year for the first time, and which I can heartily recommend to all who have not already grown it, is Hemerocallis Thunbergi. Some of the Day Lilies have dull-looking flowers, but those of Thunbergi are of a beautiful clear yellow with a delicate perfume. Those who like novelties, either in the border or for vases, cannot do better than try Eryngium amethystinum, about the best of its class; the peculiar shade in the flower-heads is very lovely. Another strange shade of colour, to my thinking more odd than beautiful, is furnished by Echinacea (better known perhaps as Rudbeckia) purpurea. It supplies a colour seldom met with in hardy flowers, and as such is valuable where variety in colour is required. It is hardly necessary to include in the short list of things tried for the first time the names of any new varieties of those herbaceous plants that are now represented so strongly, and indeed in many cases such fine things are obtainable from a packet of seed, that the purchase of named sorts is not advisable. Pentstemons and Antirrhinums, for instance, are procurable in endless variety and very fine in quality from an ordinary seed packet.

Claremont. E. Burrell.

NOTES ON HARDY PLANTS.

Dianthus Seguieri.—This as it grows here presents the appearance of a pigmy D. neglectus. The flowers are rosy crimson, the size of a sixpence and only just overtop the dense grassy cushions of foliage scarcely 2 inches in stature. I believe several forms than the correct one have gone under this name in commerce, and I feel sure the true thing is nothing like common.

Dianthus cinnabarinus.—This uncommon Pink is so named from its true cinnabar-red flowers. It is at once distinct and rare. You by no means find the plant in ordinary collections or trade sources, not even when the name is seen in the lists. I have had amusing and annoying experience in trying to again obtain this gem during the past two years. I had divided my best plant with a friend, and when weeding, one of my garden boys pulled out the last morsel, and it has only been by going back to my friend for a plant that I have been able to get possession of the true plant. I mention this to show its rarity and in the hope that those who have it will try to propagate and distribute it.

Geranium balkanum.—I believe this is a name that should be discontinued, but somehow improper names are not easily got rid of, however strong and reasonable the arguments may be. I believe on some fresh material being collected about four or five years ago a well-known botanist applied this name, and, as afterwards appeared, he had failed to identify it as the old macrorrhizum, which many of us had almost forgotten. However, the plant in suitable places, being a strong grower, is well worth a place. The flowers are almost brick-red, the leaves handsome and fragrant, especially when touched. For this quality alone the plant should be placed in the woodlands and semi-wild gardens.

Dianthus Atkinsoni.—The rich and unique crimson of this single Pink constitutes one of the brightest bits in the garden. It is hard to say why so many fail with it; it certainly gives no trouble here, which is more than I can say for many of the alpine species of the glacialis and alpinus group. Its duration is perennial beyond all doubt, but the way in which it flowers—so long and so profusely and leaves itself perfectly nude of grass—may suggest it is worn out, and these features I have sometimes thought might account for the impression that the plant is but biennial or a poor perennial. The grass grows rapidly in the autumn.

Boykinia occidentalis.—This is a somewhat stronger plant and bigger in all its parts than B. aconitifolia, and especially are the panicles of blossom spreading and elegant. Its chief beauty, however, is the pretty small flowers and the manner in which they change from pure white to a coral rose hue. A big panicle of many tints is most beautiful, and as cut material must vie with, or perhaps to many people's minds excel, the panicled Gypsophila for effect, though by no means are the sprays so large. I have only as yet tried this American plant in one way—north aspect and moist. How it would behave in a drier position I cannot say. My plants came from California and withstood the frost of last winter.

Androsaces.—I fear it is far more than we can hope for, to manage or keep all the species in lowland gardens and in districts near big smoky towns. I mean by all, those eighteen or twenty kinds we sometimes meet with in trade lists. It is by no means difficult to establish them all and even get them for a season into a state of vigorous growth, but it is a very different matter to keep them going for even two or three years. Either their native vigour gets used up, their glands become clogged, fogs deposit the atmospheric impurities about their roots, and after one or two winters they die. I have managed for many years to keep seven or eight kinds in my garden here, a locality four miles from one of the blackest cities in England. I will give their names: Carnea, including its variety Laggeri, sarmentosa, villosa, both European and Himalayan forms; foliosa, Vitaliana, Chamæjasme, lactea, and helvetica. Three of these, viz., sarmentosa, villosa, and Chamæjasme (and they are very hairy or glandular) are no doubt helped by their stoloniferous mode of self-propagation to so re-invigorate themselves annually. I venture with a good measure of reason to commend at least these kinds that have succeeded here as worthy of trial.

Gentiana ornata.—In this Yorkshire climate for the first time I have tested this for hardiness in the open, and it has not only come through safely, but at its usual date (the date of pot plants in cold frames as in the past four years) it is flowering. The position is at the bottom of a rockwork, aspect S.S.W., the stone work being 4 feet to 5 feet high. True this may be termed a very sheltered place, but as the style of rock gardening goes it is a common one, and implies no further protection of plants than the structural condition. Anyhow the winter of 1894-5 would be a severe test.

Adenophoras.—These are not much grown, and for showiness can scarcely be said to equal the Campanulas they are so nearly related to. Still, they are not without their pleasing features—at least, the two better known kinds, liliifolia and suaveolens. These are of a delicate pale blue, you may say mauve or heliotrope, sweet and lasting. They will grow almost anywhere, and for wild gardening would be suitable in every way.

Woodville, Kirkstall. J. Wood.

LILIUM CHALCEDONICUM.

By the middle of July the greater number of the different Lilies are over, and as several of those that have not yet bloomed are still in the bud state, the number of those just now in full flower is very limited. One of the brightest is L. chalcedonicum, known also as the scarlet Turk's-cap Lily, which reaches a height of 3 feet to 4 feet, the stem being very thickly clothed with pale green leaves, while the somewhat small, but symmetrically shaped blossoms are borne in a loose cluster on the upper part of the stem. The segments of the flower are thick in texture and their colour is a bright sealing-wax red, though in this respect individuals differ. I have seen some remarkably fine examples of this Lily in old-fashioned cottage gardens. It is now-a-days not very plentiful, and there is always during the dormant season a fair demand for it and exceptionally fine bulbs are difficult to obtain. This is not one of the peat-loving Lilies, for it will succeed in a stiffer loam than many other species; in fact it does best as a rule in what may be spoken of as good garden soil of not too sandy a nature. It is occasionally liable to be attacked by that mysterious Lily disease which plays such havoc with the white Madonna Lily in many places, but it does not suffer to anything like the extent of this last. The bulb of L. chalcedonicum is rather loose in texture and should be handled very carefully, otherwise some of the outside scales are liable to become detached. A great deal has been written concerning the evil effects of late planting in the case of Lilies in general; still it is well known that some are less affected by it than others. L. chalcedonicum is among those which are greatly benefited by early planting, for the new roots which are pushed out from the base of the bulbs soon after the stems die down are few in number, but very stout, so that if only one or two are broken the vigour of the bulb is influenced thereby. The leaves of this Lily are usually among the first to show above ground in the spring, for as a rule they follow close on those of the Nankeen Lily (L. testaceum), and about the same time as those of Lilium Hansoni. L. chalcedonicum, like

some other members of the Martagon or Turk's-cap group, will sometimes show but little growth above ground the first season after being transplanted, but as a rule the next year it will have recovered from the check. It is also especially interesting as being one of the parents of the Nankeen Lily (L. testaceum), which is a great favourite with many. This last resulted from the intercrossing of L. candidum and L. chalcedonicum, while on page 11 of the present volume of The Garden a new form of the same section is noticed as flowering with Mr. Ware at Tottenham. This is Lilium Beerensi, the result of a cross between L. chalcedonicum and L. excelsum, which is synonymous with L. testaceum. The flower, which is more in the way of L. excelsum, is of a deep apricot colour, with long prominent orange-scarlet anthers. Of Lilies flowering in the open ground in the middle of July we have L. elegans venustum, remarkable as being the last of the elegans group to bloom; L. longiflorum, in several forms; L. auratum, or at all events some individuals of this species, for others may not bloom till summer is well advanced; L. Batemannæ, of a reddish apricot tint, and L. Leichtlini, pale yellow dotted with red. The future display of Lily blossoms is principally furnished by L. tigrinum in several varieties, and L. speciosum, of which numerous forms are in cultivation. H. P.

The white Antirrhinum.—Where a good form of the white Snapdragon is possessed, it should be kept up by cuttings. Some years since I obtained from Mr. Molyneux some cuttings of a fine strain, the whitest I have seen, with only the faintest suspicion of yellow at the lip. This naturally enough comes absolutely true from cuttings, but I have never raised any seedlings that inherited the purity of tint of their parents. The lasting qualities of this white Antirrhinum are simply marvellous; the cuttings are stopped twice during the early spring, and when put out in the beginning of May are bushy little plants; by the commencement of June they are in flower and continue blossoming with short periods of intermission until November. To keep up this continuous display of bloom great care must be taken not to allow the plants to become weakened by producing seed-pods. Large patches are much more effective than single plants dotted about, and contrast well with breadths of Lychnis chalcedonica, Salvia patens and Gladiolus brenchleyensis. Two-year-old plants, on the other hand, are more decorative when grown in isolated positions, as they often attain a height of 3 feet and measure almost as much in diameter, and when in full bloom are strikingly effective. I regret to say that all my stock of old plants was destroyed by the late winter and the garden has been deprived of an additional feature of beauty through their absence. – S. W. F., *Torquay.*

The hardiness of the sweet-scented Verbena.—A good many of us have long ago proved this general favourite practically hardy throughout the eastern counties. It is even hardier than Tea Roses against south and west walls, and throughout Devonshire, Cornwall, &c., it is as hardy as Hydrangeas. Protected with ashes, as described by "E. J.," it may be treated as hardy in most gardens. It is only when thus treated, as a rule, that this plant can be thoroughly enjoyed. The older and stronger the plants, too, the hardier they seem to become. To make doubly sure of their hardiness the tops should be left intact until the plants begin to break in the spring. Only those who have grown these fragrant plants at home in the open can realise the amount of protection their tops can afford under free culture and treatment.—D. T. F.

Lilium odorum.—This is the Lily to which a first-class certificate was awarded by the floral committee of the Royal Horticultural Society on July 23 under the name of L. japonicum Colchesteri. A coloured plate of it was given in The Garden, April 17, 1886, as L. japonicum, which elicited a communication from Mr. Baker at Kew to the effect that it represented the true L. odorum. Whether known, however, as L. odorum, L. japonicum, or L. Colchesteri, there is a good deal of confusion existing between this Lily and Lilium Browni, though the two are totally distinct, that is to say if the L. Browni of the Dutch cultivators is taken as the type, for some imported forms, such as I have seen at Kew, appear to be of a somewhat intermediate character. There are several very marked points of difference between L. Browni and L. odorum other than those set forth in The Garden, p. 72. In the first place, the bulbs are totally distinct, that of L. odorum being broad at the base with a slightly raised centre, while that of L. Browni is narrow at the base and widens out considerably, the upper part peculiarly flattened. The colour of the bulbs, too, is quite different, for L. odorum is yellowish, after the manner of L. longiflorum, while L. Browni is of a reddish tint. Directly they appear above ground the two can be readily distinguished, for the young shoots of L. odorum are nearly green, while those of L. Browni are reddish brown, which tinge prevails to a great extent in all stages of growth. The difference between the foliage and mature flowers of the two is well set forth on p. 72, except the colour of the leaves, which in L. Browni are of a deep shining green, while those of L. odorum are of a paler unpolished tint. Except a few European species, L. odorum is the oldest of all Lilies, yet it is now quite a scarce kind. It was introduced in 1804. In the "Dictionary of Gardening" L. japonicum is given as the correct name, with that of odorum as a synonym.—H. P.

LILIUM SPECIOSUM.

Though it will be a long time before the flowers of this Lily expand in the open ground, yet beautiful flowering examples may be seen in Covent Garden Market, having been brought on under glass. They are extremely useful and more appreciated than they would be later on when those outside will be in bloom. Some growers cultivate vast numbers of this Lily, the general plan being to pot the bulbs as soon as possible, and by keeping them cool encourage root action before the tops start into growth. As the stems develop liquid manure is of great service, and a sharp look out must be kept for aphides, which, as in the case of Lilium Harrisi, soon cause considerable damage. Regular fumigation is the best way to keep them in check. The varieties of L. speciosum are numerous, for we get several from the Dutch cultivators and others from Japan. From Holland we get roseum and rubrum, but, as generally sent, the difference is only in name. Though surpassed in colour by some of the Japanese forms, the bulbs from Holland are of a very beautiful variety, and can as a rule be had in flower rather earlier than those from Japan. The white variety sent from Holland is that known as album, which differs widely from the Japanese Krætzeri. In album the bulbs are of a dark mahogany colour, deeper in tint, indeed, than in any other variety of L. speciosum. The stems and leaf-stalks, too, are dark, while the flowers are heavily suffused with chocolate on the exterior, but white within, though after they have been expanded for a few days the white often acquires a pinkish tinge. L. Krætzeri, on the other hand, has yellowish bulbs, while the flowers, whose segments reflex in a very graceful manner, are white, tinged, especially when partly expanded, with green on the exterior, while the inside of the blossoms has a greenish stripe, which extends partly down the centre of each petal. The very deeply coloured forms which are sent to this country from Japan in considerable numbers, sometimes under the name of rubrum and at others that of Melpomene, are very beautiful, but for the earliest blooming plants the forms from Holland find favour with most cultivators. For general decoration L. speciosum has a great advantage over most other Lilies. In the first place it is of good constitution, and retains its foliage well when grown in pots, which several Lilies do not; next it flowers at a time when many greenhouse plants have lost their freshness, and consequently affords an agreeable change, while the perfume of the blossoms is not nearly so overpowering as that of L. auratum and its numerous varieties. H. P.

Garden Flora.

PLATE 1026.

HIMALAYAN RHODODENDRONS.

(with a coloured plate of R. grande.*)

The headquarters of the genus Rhododendron is undoubtedly that portion of our Indian Empire overshadowed by the Himalayan Mountains. No area of similar extent has furnished so large a number of species that may be grown in the British Isles, neither have any been found which can rival the Indian species in their tree-like size or in the beauty and variety of their flowers. Judging by what we already know of the flora of the less accessible parts of China, it is probable that the genus may, so far as mere numbers go, be more strongly represented there than in India, but it is scarcely possible that any will possess the regal characteristics of the finer species inhabiting the middle elevations of the Himalayas. The one name which more than any other will ever be associated with these plants is that of Sir Joseph Hooker. Previous to his travels in the Himalayas but few were known, and it was directly due to his efforts that the great majority of the species were introduced. Some of the finest specimens in Cornwall and Wales are those raised from the seeds he sent to Kew forty-five years ago. In his fine work on "Sikkim Rhododendrons," published soon after his return, a little over forty species are enumerated, and it is a curious fact that this number has scarcely, if at all, been added to since that period. The altitudes at which they grow range between 4000 feet and 14,000 feet, but it is at heights of 10,000 feet and upwards that the genus is most abundantly represented. Above 12,000 feet Sir J. Hooker says that three-fourths of the whole vegetation consists of Rhododendrons. The climatic conditions that prevail there have not, of course, their exact counterpart in any part of Britain. The mean temperature at Darjeeling (in which neighbourhood most of the species are found) does not widely differ from that of London, but the extremes of heat and cold are much greater here than there, and it is only a few that can be said to thrive out of doors really well and flower in the London district, although a considerable proportion can be kept perfectly healthy in foliage when grown in well-sheltered positions. The greatest successes with Himalayan Rhododendrons in the British Isles have been obtained near the sea in the south and south-western counties, where the temperature is equable and the atmospheric moisture abundant. The districts in which they are grown to greatest perfection are near Swansea, in Wales, and about Falmouth, in Cornwall. It ought to be the task—an extremely pleasant one—of all those who desire to grow them either outside or under glass to visit one or both of these places.

The general conditions which attend the successful cultivation of Himalayan Rhododendrons do not differ materially from what the great bulk of the ericaceous family requires. A soil which is naturally peaty is no doubt the best, but it is by no means essential; they may be grown out-of-doors in loam either light or mode-

* Drawn for The Garden by H. G. Moon in the Royal Gardens, Kew. Lithographed and printed by Guillaume Severeyns.



RHODODENDRON GRANDE

rately stiff so long as lime is absent. A plentiful admixture of leaf-soil is always beneficial. Although these plants (so far as I have been able to judge) flower better after a hot summer, especially when grown under glass, it by no means follows that they like full exposure to the sun. On the contrary, the best position for them in a house is at the north end, and in the open air they should always, if possible, be planted near trees—not absolutely under them, but near enough to be screened from the sun for a few hours a day. The advantage of such a position is also felt in winter in the protection afforded from cutting winds and frost. This summer I have especially noticed that young plants of R. fulgens and R. campanulatum are badly scorched where the midday sun has pitched directly on them. Either indoors or out a uniformly moist condition must be maintained at the root. When planted out in



Rhododendron Falconeri.

beds under glass there is, however, often more danger of overwatering than the reverse, especially in newly-made beds. The mistake is sometimes made of giving too great a depth of soil; 2 feet, I should say, is ample. A soil consisting mostly of peat is best for plants indoors; leaf-soil may be added, but if loam is introduced it should be of a rather light, sandy nature. All the larger species may be very well grown in tubs, for this admits of the plants being taken outside during summer—a course which is always conducive to good health and abundance of bloom. Fire heat is not needed at any time of the year; in fact, an unheated house, constructed so that the roof may in great part be left open in summer, is the best for these Rhododendrons. In Cornwall and Wales they enjoy great popularity, but in the more inclement parts of the kingdom, where cultivation under glass is necessary, they do not obtain the attention they deserve. They flower mostly from January till May, and no greenhouse plants provide a richer display. The low temperature they require makes their cultivation quite inexpensive after the initial outlay. It would be well worth while devoting a house entirely to them, for even out of flower their fine foliage makes them attractive.

The following is a list of species grouped according to their hardiness:—

Hardy near London.

Anthopogon	Fulgens
Campanulatum	Glaucum
Campylocarpum	Niveum
Ciliatum	Thomsoni
Cinnabarinum	

Hardy in Cornwall and S. Wales, also in especially mild localities in the midland counties or even in parts of Scotland.

Arboreum and vars.	Keysi
Barbatum	Lanatum
Falconeri	Lancifolium
Grande	Triflorum
Hodgsoni	Wighti

Cool Greenhouse.

Aucklandi	Hookeri
Camelliæflorum	Maddeni
Dalhousiæ	Nuttalli
Edgeworthi	Pendulum
Formosum	

R. GRANDE (syn., argenteum).—The subject of the plate is undoubtedly one of the finest of all Rhododendrons. Unfortunately, it is not hardy near London. The flowers occur in large rounded trusses, each flower being 2½ inches across, white, beautifully flushed with rose on first opening, and marked with a ring of purple blotches at the base. The leaves, whilst of a rich dark green above, are silvery white beneath. The accompanying plate gives an admirable presentation of the flower and truss, but want of space prevents the beauty of the foliage being shown. I have measured leaves considerably over 1 foot long. This species attains a height of 30 feet, and is found on the Sinchul and Tonglo Mountains. It is grown out of doors by Sir J. T. Llewelyn at Penllergare.

R. FALCONERI.—This is allied to R. grande, but has a compacter truss and differs much in foliage. Sir Joseph Hooker says that on the Tonglo Mountain, where R. grande is found, that species grows up to altitudes of 10,000 feet, and is then suddenly replaced by R. Falconeri. As might be expected from this, it is much hardier than R. grande. I saw it thriving very well in the famous Duchess' garden at Belvoir some years ago, but Mr. Divers has lately stated that it has been severely damaged by the past winter. It has large oblong leaves about 10 inches long, coated beneath with reddish down, dark green, slightly downy and curiously wrinkled above. The flowers are of a curious shade of creamy white tinged with lilac towards the base. R. eximium is a fine variety of this, differing in its bright pink flowers and the thicker reddish brown fluff on the upper surface of the leaves.

R. ARBOREUM.—This, the longest introduced and perhaps the best known of the Himalayan species, is also one of the largest in stature and bulk and one of the most variable. The various forms may roughly be divided into two groups, the one with foliage that is silvery beneath, the other having the underside of the leaf covered more or less with a reddish tomentum. The leaves of all are from 5 inches to 8 inches long, lanceolate and acutely pointed, the trusses rounded or sometimes almost conical, with the flowers closely packed. The colour of the bell-shaped corolla varies from rich crimson to almost white. The typical form of R. arboreum has bright red flowers and leaves that are silvery beneath. The plants known under the following names belong to the arboreum group, some having been given specific rank: Campbelliæ, flowers rosy purple, leaves rusty beneath; limbatum, flowers rosy purple, leaves silvery beneath; nilagiricum, flowers rosy, leaves reddish beneath; cinnamomeum, flowers almost white; Windsori, flowers and trusses smaller, rich crimson. The species was used many years ago for hybridising with the American and Caucasian species—Nobleanum and altaclerense being the first results. Its blood, no doubt very attenuated sometimes, runs in some of the fine red-flowered garden varieties now grown. It was introduced about 1820.

R. BARBATUM is described as being in a wild state 40 feet to 60 feet high; I have seen it about 12 feet high in Cornwall. The name refers to the bristly hairs which clothe the short petiole, and are the most distinguishing character of this species. The leaves are 5 inches to 7 inches long and of broadly lanceolate shape. The flowers, of a rich blood-red colour, are borne in a compact truss 4 inches or more in diameter.

R. LANCIFOLIUM is probably a small-sized variety of barbatum. It has narrow lanceolate leaves, and the petioles, instead of being bristly, are covered with curious warts. The flower-trusses also are smaller.

R. HODGSONI.—A spreading shrub or small tree, rarely more than 12 feet high, branching from the base and growing outwards rather more than in height. The leaves are very stout in texture, upwards of 1 foot long, covered beneath with a grey (or very rarely reddish) tomentum, the upper side being of a bright, somewhat metallic shade of green. The flowers are of a pale rose-purple. On the whole it is more noteworthy for its foliage than its flowers. It is grown outside in both the Welsh and Cornish gardens, and may possibly be hardy enough for the London district.

R. WIGHTI.—A small tree, found at elevations of 11,000 feet to 14,000 feet. It appears to be allied to R. Hodgsoni, and does indeed occur on the same mountains as that species, but at higher altitudes. It differs, however, in having yellow flowers; these are individually 2½ inches across, and are produced in large rounded trusses. The leaves are very firm and stout, measuring 6 inches to 10 inches in length by about one-third as much

in width; when young they are quite white underneath, becoming grey with age.

R. niveum.—One of the hardiest species, but far from the most showy. The young leaves are covered with a white tomentum all over; the upper surface afterwards becomes deep green and glabrous. The flowers are closely packed in a small head, and are of a purplish lilac colour.

R. fulgens.—This is at once one of the richest coloured, hardiest and rarest of Himalayan Rhododendrons. It blooms out of doors very early in the year (March), and does not always escape the damaging spring frosts, but if it does, it is without doubt the richest and most brilliantly coloured hardy shrub flowering at that time of year. The flowers are in compact rounded trusses about 4 inches across, their colour a rich, but bright blood-red. The leaves are coated beneath with a rusty coloured felt, the plant being often represented in gardens by the less striking R. campanulatum, which can scarcely be distinguished from it when in leaf, but which has white or pale purple flowers. The true plant has been grown outside for many years in the Rhododendron dell at Kew, and it has never been injured by frost, nor does it ever fail to set abundance of bloom. In the Himalayas it grows at elevations of 12,000 feet to 14,000 feet.

R. campanulatum. — This is perhaps the hardiest of all the Himalayan species, but it is far from being the most attractive. It is valuable, however, in flowering during spring (April) when few other Rhododendrons are in bloom in the open. It forms a widely spreading bush, rarely more than 6 feet high. The leaves are coated beneath with a brightly-coloured reddish felt. The flowers are pale purple, changing to nearly white, or in some forms almost white from the first. Introduced in 1825. It reaches up to altitudes of about 15,000 feet.

R. lanatum.—This species, as the name implies, is distinguished by its woolliness. The young branches, both surfaces of the leaves and the petioles are covered with a dull white or tawny tomentum, more so than any other Himalayan species. The flowers are 2 inches across, sulphur-yellow, and six to ten are borne in one head.

R. Aucklandi.—In many respects this is the finest of species requiring greenhouse treatment. It has smooth foliage of a rich and glossy green, each leaf being from 6 inches to 12 inches long and of narrow oblong shape. Its large, saucer-shaped flowers are of the purest white and frequently 6 inches in diameter, from five to seven of them being borne on a truss. This species attains the dimensions of a small tree, its stems being of a grey colour with the bark peeling off. It has been used for hybridising purposes, but not so much as might have been. A hybrid between it and Hookeri called kewense (raised at Kew in 1874) has flowers of a pale flesh colour, not so large as those of Aucklandi, but more numerous in the truss. There is also a very pretty hybrid known as Aucklandi hybridum which is hardy in the London district; its flowers are pure white. This species is named in honour of the one-time Governor-general of India—Lord Auckland. It is also known as R. Griffithianum.

R. Thomsoni.—Almost similar in colour to R. fulgens, the flowers of this species are borne in loose trusses more after the fashion of Aucklandi. It is quite hardy in the London district and flowers in the early part of April; the leaves are elliptical, 3 inches to 4 inches long, very dark green above, but semi-glaucous beneath. This is a plant of bushy habit; the largest I have seen is growing at Tremough, near Falmouth—a magnificent garden for these Rhododendrons. It was 12 feet high and 15 feet through when I saw it about two years ago. Covered with the deep red flowers it must make a glorious picture.

R. campylocarpum is closely allied to the preceding; it is of similar habit, although perhaps not quite so strong a grower. The leaves are similarly glaucous beneath, but not so dark green above. An ample distinction is afforded by the flowers, which are pale yellow. They are borne in a loose truss and are scented like honey.

R. Hookeri.—In gardens this is a very rare plant. I have only seen it in flower once, and that was in the spring of 1888. It is a native of Bhotan, and on the Oola Mountain is said to form entire thickets accompanied by Pinus excelsa. It belongs to the same group as Thomsoni and campylocarpum. The leaves are oblong or oval, 4 inches long and rather glaucous beneath. The flowers are smaller and more numerous in the truss than those of R. Thomsoni, and are of a bright, but not so rich a red as in that species.

R. cinnabarinum.—In "The Flora of British India" this name is made to include what have previously been known as R. Roylei and R. blandfordiæflorum. The species is, indeed, a most variable one, having flowers of a brick-red, rich crimson, or sometimes greenish colour. They are all distinguished by the long narrow corolla, resembling a Lapageria. The leaves are small, pointed, of a dull glaucous green above, slightly ferrugineous beneath; hardy near London.

R. triflorum bears some resemblance to the preceding in foliage, but the leaves are smaller and the flowers are yellow and more open. It is not so handsome a plant; said to be as hardy as cinnabarinum.

R. Keysi.—A curious species, with flowers more like a Correa than a Rhododendron. They are brick-red, about 1 inch long, the lobes of the tubular corolla being almost straight and not spreading. The leaves resemble those of R. triflorum and R. cinnabarinum, to which species it is most nearly related.

R. Nuttalli.—Individually the flower of this species is the largest of all Rhododendrons. As many as ten or twelve flowers are produced in one head, each one 6 inches in diameter, white, becoming creamy yellow in the centre. The flower is, indeed, like a large Lily. The species is of tree-like habit, reaching a height of 30 feet. It is of rather ungainly habit, and does not succeed so well under cultivation as many of the others do. The large rugose leaves are 8 inches to 1 foot long and about half the width. So far as I am aware it is not grown outside in Britain.

R. Maddeni.—A shrub 8 feet to 10 feet high with bright green lanceolate leaves. The corolla is pure white, bell-shaped, and about 3 inches across the mouth. It is known also as R. Jenkinsi. R. calophyllum is practically the same thing, but a varietal distinction is founded on the shorter calyx lobes and much smaller seed vessels.

R. camelliæflorum.—A rare shrub of straggling habit, with long, thin pendulous stems. The leaves are very like those of R. Maddeni, but smaller. The flowers are pure white or faintly rose-tinted, and are curiously like some of the single-flowered Camellias. A well-defined ring of stamens encircles the pistil. The corolla is 1½ inches across, with five blunt, rounded lobes. I have only seen it grown under glass.

R. Dalhousiæ.—The true Lady Dalhousie's Rhododendron is one of the least common in gardens, what is frequently met with under the name being a hybrid between it and formosum. It is a shrub of scrambling habit, and in its natural state is nearly always seen growing as an epiphyte. About half-a-dozen flowers are borne in a head, the deeply bell-shaped, Lily-like corolla being 4 inches across, in colour white, tinged with rose, becoming yellowish with age. The elliptical leaves are 5 inches long, dotted underneath with minute scales.

R. Edgeworthi.—A very distinct and beautiful species, never getting beyond the shrubby state. It has long thin branches and comparatively small leaves (2 inches to 4 inches long), which are very rugose on the upper surface and woolly beneath. The flowers are over 4 inches across, the deeply lobed, rather flat corolla being pure white. Two or three flowers are borne together. This is a greenhouse species, and not one of the easiest to cultivate. In a state of nature it is frequently epiphytic on Pine trees.

R. ciliatum.—A bushy plant which thrives well in sheltered positions near London. Its leaves are densely covered with hairs when young, becoming less so as they get older. The flowers are borne loosely in small trusses, and are rosy white on opening, becoming a purer white with age. I have seen this about 6 feet high in the Cornish gardens. It has been used for hybridisation, and amongst others R. præcox and Rosy Bell have been raised from it.

R. formosum.—There are two very distinct varieties of this in cultivation; the one has narrow leaves, in shape and size almost like those of an Indian Azalea; the other has them many times larger, obovate, and 5 inches long. Both have the margins ciliated. The flowers are in each variety white, although in the bud stage quite rosy pink. They are about 3 inches wide and as much in depth. R. Gibsoni and R. Johnstoni are forms of this species, differing chiefly in the larger leaves.

R. anthopogon, flowers sulphur-yellow; R. glaucum, flowers dull rose-purple; and R. pendulum, flowers white, are small-leaved dwarf shrubs, chiefly of botanical interest.

W. J. Bean.

The Week's Work.

KITCHEN GARDEN.

Lifting second early Potatoes.—The whole of these may now be lifted, sorted, and stored away in the coolest place procurable. A shed with a north aspect is the best, more particularly for seed tubers, a south aspect inducing loss of weight and quality in those that are to be eaten and shrivelling, followed by an unsatisfactory sprouting of the seed in spring. A good plot from which this vegetable has been lifted should now be selected for early spring Cabbages, and if allowed to lie in a rough condition from now till a fortnight before planting takes place, a sweet condition will be ensured. Where the ground is liable to be infested with slugs in wet winters it will be well to spread over the surface a good coating of lime and soot, afterwards scuffling it in deeply with five-tined forks. Digging the plot a fortnight before planting and treading well afterwards will allow of a natural settlement, and give the plants a far better start than loose ground. This applies specially to light soils.

Young Carrot beds.—Those who took the hint given some time ago and sowed a small bed or two in good soil, will now realise the value of such. For soups and flavouring generally, small Carrots are far in advance of older and more matured roots. If the grub has not yet attacked them it will pay to give another good sprinkling of wood ashes, soot, or burnt garden refuse between the rows, following it by a good soaking of water. Hoe between and hand-weed all young Carrot beds, and in cases where the dreaded grub has actually attacked the crop, procure a large tub capable of holding 100 gallons of water. Into this throw a bushel each of lime and soot, stirring it well round and allowing it to stand for a night. The following day well water by means of roses the Carrot bed. This will exterminate the pest and promote a healthy growth. I saw a bed some time since which had been so treated, and the effect was marvellous. It is important that the water used should be both warm and soft.

Globe Artichokes.—It is many years since these made such a weakly growth, and those who would have the plants regain their original strength and vigour by another spring must give liberal treatment between now and the period at which the leaves and stems begin to decline. Should a number of small heads form—for they cannot but be small this summer—the whole of them must not be allowed to remain on the plants, and where the first mulch of manure has been washed away by repeated waterings or scattered by birds in search of food, a second must be given

without delay and as much farmyard manure of good strength applied as time and means will allow. Those plants which were raised from offsets in pots and transplanted at the end of May will require all the nourishment that can be given them and have any heads that may issue from the centres pulled off. These should make good useful bearing stools next year if carefully protected in winter.

Spring Cabbage.—Several weeks since I gave my reasons for refraining from very early sowings of this vegetable. I make my principal sowing at the end of the first week in August, Ellam's Early, Cocoa-nut, and Earliest of All being the varieties. Wheeler's Imperial and Mein's No. 1 are also good sorts for present sowing. If good seed is used it may be sown very thinly. Thick sowings are ruinous. My next sowing will be about the 25th, Enfield Market or some good variety of second early being included in it. As a rule, Cabbages for wintering in frames will be quite early enough if sown at the beginning of September. If sown earlier, large ungainly plants, which lift badly and are prone to run to seed after flagging from removal in spring, follow. Sow the red pickling Cabbage at the second sowing and with the third for frame protection.

Greens amongst Potatoes.—Where through want of space planting Broccoli and kindred subjects amongst late Potatoes has been compulsory, the young plants must now be seen to, in order that they may not be ruined by the Potato haulm growing over and smothering them. Gently turn this back so as to admit light, air and rain to the roots. If the plants, through being partially shaded, have become at all weak and leggy, they must be made firm, at the same time bringing up a little soil to the base of the stems, as these cannot be mounded up like those growing on a separate plot. All late planted batches of Broccoli, Kale and general winter and spring stuff should now be earthed up to steady them, a little artificial manure being first sown broadcast amongst them. These late batches are frequently worth all the labour that can be spared them, helping out the supply in spring just at a time when scarcity would otherwise prevail.

Late-sown Beet.—I pointed out some time ago the necessity for a late sowing of Beet in places where this root is eaten by itself at lunch, as large roots are generally objected to for slicing up. If the final thinning has not been given, see to it at once, and keep the rows free from weeds and the intermediate spaces frequently hoed to promote a clean, sweet growth. The coarse varieties which show white rings in their centres when cut are not fit for salad, and this fault is present in three parts of the so-called table Beets. I have this year again proved how well Beet does when transplanted, one bed in particular which was at first very patchy now being quite level through the speedy growth of the transplanted roots. This is worthy of note, as many people might think the experiment worthless.

Lettuce.—If another transplanting is now made of various sorts on good moist land, it will probably keep up a good supply until the Cabbage varieties, sown as advised a week or two ago, are fit for use. These latter do not run to seed like the Cos varieties, and with much cooler nights and mornings remain in sound condition for a very long time. In planting, a slight drill is still advisable, as then a little soil can be drawn into it around each plant after watering, this preventing evaporation and excluding parching winds from the roots until well established. In all cases where a scarcity is apprehended it should be remembered that by leaving a percentage of plants on the seed bed and keeping them well watered, Lettuce may be cut a fortnight earlier than from the transplanted rows. Any Lettuces arrived at maturity may be taken up with care and laid in under a north wall, where they will keep for some time in an eatable condition. Of course, where other batches are coming on apace this is not necessary.

Rhubarb.—The erroneous idea is often entertained that in order to make the best jam and wine, Rhubarb ought to be in a semi-withered condition. Those, however, who desire quality in either will do well to take the sticks which result from a secondary growth, which occurs in most vigorous Rhubarb beds and is now at its best. Some varieties too are better for jam and wine-making than others, the small-growing Prince Albert and Hawke's Champagne making a delicious preserve. Any seed stems should be taken off at once, so that the most may be made of the remainder of the season for strengthening and developing the stools for next year's work.

Seed crops.—Onions, Beet and similar vegetables being grown for seed must now be attended to in the way of supporting the growth. Stakes and cross rods are the best for Onion beds, stout rustic stakes being the most suitable for Beet, Broccoli and Kale. As the early sorts of Cauliflowers and Cabbages approach maturity protection by nets must be given, or birds will lay claim to the seed. Any stray Cabbage or Cauliflower on ordinary quarters showing for flower must at once be destroyed, as the probability is that any choice strains being seeded in the same garden will be crossed and spoiled. Opportunity should be taken on fine sunny days to destroy all the common white butterflies, as from their eggs issue the destructive green Cabbage caterpillars, although this fact is not generally known. J. Crawford.

FRUIT HOUSES.

Early Peach house.—In most houses the trees will now have been cleared of fruit, and there should be no delay in doing the necessary cleansing should the trees be infested with red spider. The trees should be thoroughly coated with a thick solution of sulphur, which should be allowed to remain on a few days. Many trees if hard forced make a late growth if syringed freely after being kept dry for a time, and though it is necessary to frequently syringe after a hot day, it is not well to encourage late growth, and by dressing with sulphur, daily syringing is avoided. Abundance of air must now be given and the house kept as cool as possible, the ventilators being left wide open and the sashes removed, if possible, to thoroughly mature the wood. The roots should not be neglected, as these are most active, and in case the borders do not readily absorb the moisture they should be lightly forked over and given a good mulch of manure, thoroughly watering afterwards. I find cow manure, partly dried and broken finely, a splendid mulch for Vines, Peaches, and Figs on a light sandy soil. In the case of young trees growing too vigorously, surface dressings are not advisable, but old trees may be given liquid manure, failing a good mulch. There will be fewer complaints of unripened wood with early trees, and only in rare cases will it be necessary to keep up fire-heat to ripen sappy wood. Should the wood be at all soft, give a little fire-heat, with abundance of air. If the pruning advised in an earlier calendar was not carried out as soon as the trees were cleared of the fruit, there should be no delay in cutting out the old bearing wood, removing any useless spray or weak lateral growth. By doing this pruning now, very little will be required later on. I do not advise shortening back branches or shoots. This is best deferred till the trees have cast their leaves, as if done now it will cause a late growth.

Successional Peach houses.—Much the same treatment will be required as advised in earlier houses. Unfortunately, very few Peach houses are constructed so that the lights can be removed entirely at this season, and if the air given is insufficient, there will be more difficulty in starting the trees next season. Should the trees be infested with thrips, apply quassia either in the form of a solution prepared from the chips with a handful of soft soap or, what is better, Bentley's prepared extract, a safe preparation which can be mixed for use in a few minutes. Tobacco water is also a well-known remedy and most efficacious. In cutting out the old bearing wood do not cut away any likely to be wanted for extension. Merely remove that which keeps away light and air and will not be required to produce fruit next season.

Late houses and cases.—The fruit in these structures will be approaching the finishing stage and should get free exposure. Any misplaced fruits should be brought to the front by pieces of lath, giving abundance of food in the way of liquid manure or mulching. Late kinds of the Walburton Admirable type in unheated cases should get liberal treatment, the fruits being freely thinned. It is not too late to thin even yet any of the late kinds. The trees should get ample moisture in all parts of the house up to the finishing stage, and if the fruit is required for an early date, the house will be benefited by early closing. Syringe the trees freely and maintain a genial temperature. This treatment will assist in ripening the wood and greatly add to the quality of the fruit.

Replanting Peach houses.—It often happens when these trees are hard forced that there are losses by canker and other diseases, and when it is intended to renew these or destroy worn-out trees, the grower will find it advisable to select trees at this season for the purpose. All growers know the value of trees ripened under glass if the house is to be forced next season. Many of our large growers now make a speciality of growing such trees, and of course there is little trouble with them, as they are lifted yearly and in nice condition for removal. Others are obliged to resort to trees from open walls, and to these my notes refer. If these trees are gone over fortnightly and stopped, removing weak growth and developing the lateral or fruiting wood for next season, they will be in better condition and may be removed earlier than usual. I am an advocate for early lifting, as, provided due attention is paid to moisture, the wood will not shrivel. I have trees lifted with most of their leaves last October that never felt the shift and fruited well, having been prepared previously.

Newly-planted trees.—If these are young and not obtained from walls, but as small one-year trees from open quarters, generous treatment should be given. I do not hesitate to say many trees would be better if not cut so severely the first season or two. It is surprising what space a young tree will cover in one year if given every encouragement; in most cases the knife need not be used at all this season. The trees may be kept in shape by pinching foreright shoots and by giving ample room for lateral growth and main branches. I am aware many good cultivators do not care to lay in the lateral shoots from strong leaders, but shorten them back to the base. This is not necessary, as these will be of great benefit to the trees and will soon cover the space allotted them, thus saving time and, what is so important, prevent the main shoots growing so gross. There will be fewer insect pests where there is free growth, and in the case of trees which cast their buds badly I have known it to cease by allowing more freedom of growth. Food, moisture and a free circulation of air will mature new growth and plump up the buds for forcing.

Orchard house.—The trees that have been cleared of fruit and have made a fair growth may now be removed, as advised for Cherries in an earlier calendar. Peaches and Nectarines cleared of fruit may be treated liberally as regards food at the roots. As these trees absorb the moisture so rapidly, liquid manure should be given daily, and there should be no lack of clear water with a good mulch on the surface. A short time before removal the trees may be prepared for the change by twisting them round, and when taken into the open the roots should be well attended to in the way of moisture. The trees in pots require attention in the way of cleansing as advised for planted-out trees, and when removed into the open they should be syringed overhead in the afternoon. The trees trained to back walls should get all the exposure possible by removing the lights. Apples and Pears in pots will need liberal treatment for the next few weeks. The trees will take liquid manure twice a day, and every attention must be paid to the top-dressing,

and as the fruits approach maturity the supplies of food must cease, only giving clear water. It is necessary as the fruits attain maturity to support them either by pieces of net or stout muslin. Apples and Pears finish much better in the open exposed to the air and night dews when fully developed. They must be protected from birds, and if wasps are troublesome, a light covering of tiffany will be necessary.

G. Wythes.

Kitchen Garden.

POTATOES AND TURNIPS.

Potatoes are behaving very strangely, and what to do for the best with many of them is not easy to decide. Early and second early varieties planted comparatively early produced moderately heavy crops and matured before the rains commenced. There need have been no hesitation as to what to do with these. Instead of waiting till the haulm turned quite yellow, thereby inviting an attack of disease and giving all a chance of growing out directly a soaking rain fell, the better plan would have been to lift, sort over, and store before anything happened to the crop. Because the skins are not set hard enough for the tubers to be roughly handled without a slight disfigurement resulting is no reason why lifting should not take place, for the simple reason that early lifting impairs neither the quality nor the keeping properties of the tubers. In the southern half of this country the bulk of Ashleafs, Sharpe's Victor, Cole's Favourite, Early Regent, Early Rose, Puritan, Beauty of Hebron, White Elephant and other early maturing varieties ought ere this to have been lifted and stored, the exceptions to the rule being in favour of any planted late in April or in May. Those who failed to lift in good time now find that protuberation has commenced, and a few days' longer delay would have meant a considerable depreciation in the value of the crops. Last winter so many seed Potatoes were ruined by the severe frosts that there was a great scarcity at planting time. As a consequence many had to be bought; some turned out true to name, others were much mixed, and the breadths of the latter are very annoying to their owners, especially when quite late varieties are dotted among early maturing sorts. I yet advise lifting the latter at any rate, leaving the late Potatoes to grow for a time longer. Standing on the ridges and drawing the haulm to a certain extent save the crops from disease and for a time prevent premature sprouting, and may be practised with advantage if there is not time for lifting. Late Potatoes are growing strongly, and in most cases should be left undisturbed. Prior to the change to wet weather many of them had formed a surprising quantity of haulm, but few or no tubers were to be found under them. Both top and bottom growth is now going on briskly and the crops may possibly be extra heavy.

After experiencing such a difficulty in procuring sufficient planting tubers, it will perhaps be superfluous to advise that more than usual be saved for seed, but there are short-sighted people who never seem to profit by former experiences. For small or private gardens generally the short-topped, early maturing varieties are the most profitable, and far more of them should be grown for local markets, thereby obviating the necessity for retailers to send to Cornwall, Jersey, and France for so many. Always save abundance of medium-sized tubers for planting the following spring, and take good care of them from the time they are lifted. Taking good care of them means keeping them stored thinly and in a fairly light and cool position to prevent premature sprouting, additional protection being afforded during the winter or whenever severe frosts are imminent. If it is thought desirable that seed Potatoes should be greened, let the greening take place in a dry, light shed, and not in the open, or the chances are a touch of disease may be taken with the colour.

There is yet another motive for early lifting and storing. An early clearance of the ground admits of a successional crop of some kind being planted or sown with every prospect of its proving remunerative. Quite a variety of suitable successional crops could be named, and foremost among these I would place

Turnips,

which form a very acceptable vegetable during the winter, and are always in demand for flavouring. Then if a portion of the crop, and those undersized generally, are left on the ground throughout the winter, the bulk will give abundance of succulent greens which afford a good change with other green vegetables. No crop is more easily grown at this time of year. All that is necessary is to fork over the ground, removing the rubbish, and making all fine, level, and firm. Drills can then be drawn 12 inches to 15 inches apart, the latter distance being desirable for the stronger growers, watering if at all dry, and then sowing the seed somewhat thinly. It will germinate quickly, and if the seedlings are kept well coated with either soot and lime or road dust, neither slugs nor Turnip fly will greatly interfere with them. Thin out lightly at first, and subsequently to a distance of from 6 inches to 9 inches apart, according to the variety. They will grow rapidly this season. Chirk Castle Blackstone, a short-topped or strap-leaved form, is the best winter Turnip in cultivation. It is very hardy, and though the skin is black, the flesh cooks white and is very mildly flavoured. The yellow-fleshed varieties—notably Orange Jelly—are hardy and good, and any other white or coloured variety of which seed is at hand may also be sown.

In some districts acres of Potatoes and Peas are followed by Turnips, not, however, for either cooking or sale, but to be dug or ploughed in as manure. Year after year profitable crops are had from small holdings in the neighbourhood of Bromham, Wiltshire, farmed by working men, and green Turnips are all the manure given. Instead of the land lying fallow for several months it is covered by Turnips, these preventing the loss of fertility by evaporation, in this way saving far more than they take out, and, being duly dug or ploughed in, decay slowly and prove excellent as a fertiliser. It is the lighter or sandy soils that are most benefited by this and other forms of green manuring, and this knowledge should also be turned to good account in many private gardens as well as market fields.

W. I.



Rhododendron Keysi. (*See p.* 104.)

Endive—second sowing.—The time has arrived when a second sowing of Endive should be made, the first sowing now being fit for thinning out. Sow principally the Broad-leaved Batavian, Fraser's Improved being about the best I have ever grown, although an old variety. A little seed of Moss Curled may also be included in the sowing, as, should the early winter prove mild, it may, even where frame room is scarce, stand uninjured in the open border, where it may be blanched with pots or slates, and thus still further spare the frame-protected broad-leaved stock.

When removing my stock of Endive into frames I always leave say every other plant on the border for first use, and an early cutting may be secured by leaving a good many seedlings on the beds when the rest are transplanted. Removal of the plants should not be done in wet weather, as, be the workman ever so careful, the foliage is apt to become besmeared with dirt, which remains on the plants throughout the entire growth and is apt to affect the salad bowl.

Saving Bean seed.—Where desirable to save seed of any choice variety either of the French or Broad section of this vegetable, the pods should be gathered from a mid-season crop, as if taken from later ones they are often insufficiently mature to produce good results the next season. After being gathered the pods should be placed in a cool, dry glass house for several weeks, after which the seed may be stored away in drawers or hung up in muslin bags in a perfectly dry place. —J. C.

Transplanting Parsley.—Where any frame or pit is not likely to be wanted for any other purpose till spring it would pay to make a sowing of Parsley in it, thinning out freely the young plants. Thus a supply of Parsley, let the winter be ever so severe, may be had. Where young Parsley needs thinning out, it is not yet too late to transfer the plants drawn out to any spare border which cannot well be used for other purposes, nothing tending more to ease a gardener's mind in winter than a knowledge that his stock of Parsley is abundant. Where any choice strain is being saved for seed the bed should be gone through and all small heads of seed removed in order to throw strength and quality into the rest; support also against wind.—N. N.

WINTER TOMATOES.

Attention must now be turned to raising the plants to supply fruit in the months of November, December, and January, and as all varieties are not adapted for winter work, I would recommend Ladybird, and where a corrugated form is not objected to, the old dwarf Orangefield will be found to answer well, one good point in its character being its tendency to crop from the very lowest joints of the plant. Conqueror and the Old Red are also good. Sow the seed in small pots, and place in a comfortable temperature, allowing abundance of air from the moment the seedlings peep through the soil. When the seedlings are 3 inches high remove them to a frame, standing the pots on a hard ash bottom, and keep the frame somewhat close for a week, after which plenty of air must be given, the lights being entirely removed during fine days. Care must, however, be taken that heavy rains do not sodden the balls, especially just after potting, or these autumn Tomatoes will turn yellow and fail. Repot at intervals until the fruiting size is reached, namely, a 10-inch pot, practising firm potting and using a compost of good open loam, road grit in plenty, and a sprinkling of artificial manure, nothing answering better than bone meal. The use of farmyard manure, dangerous at any period, is doubly so in autumn, there being less sun to harden and solidify the growth. By the middle of September the plants may be removed indoors, a light, airy house where sufficient heat can be given to keep the atmosphere buoyant suiting them best. If the plants can be arranged pretty close to the hot-water pipes, so much the better, as the gentle warmth from these, coupled with a little front air day and night, will aid the first trusses to set their fruit and ward off the disease. If any fruits should set when the plants are in the frames and before receiving their final shift, do not remove them, as these will serve a two-fold purpose, first keeping growth in check and furnishing a nice gathering a month after the plants are removed under glass. Another thing that must be avoided in winter Tomato culture is closing up the house and throwing water about the floors and stages. This is simply ruinous; the drier and more arid the air the better the results, so long, of course, as a parched condition of the same through fire heat is avoided. If at the time the plants are in flower the weather is extra dull and humid, it will be necessary to go over the blooms at noon and assist fertilisation with a brush or rabbit's tail. J. C.

Staking late Peas.—Peas of the Ne Plus Ultra and British Queen type sown about the second week in June will now be forward enough for supports. Bearing in mind the exceptional value of Peas during September and October, it will be well not to allow the least postponement of this operation, even if other work has to stand still for the time being. Once let the haulm become twisted and blown over by the wind, and it might as well be pulled up and thrown away. Use good stout stakes, as the growth of the taller late sorts of Peas is often rampant, especially in cool, moist autumns, they not unusually running up to a height of 8 feet or 9 feet. When the haulm has ascended to the top it will be safe to tie cross rods horizontally along each side, thereby enclosing it and preventing it from falling down and smothering the lower growth. Previous to staking draw a little soil up to the rows and, except on strong land, mulch with some lightish material to conserve the moisture. There is no need, however, of any extra manurial application for such late crops, as a harder and more wiry growth will better withstand mildew. If it is seen that too thick sowings were practised, it will be best to reduce the bulk of the haulm even now, as unless a sufficiency of light and air can penetrate to the interior, mildew and every other evil common to late Peas may be apprehended. Where for extra late dishes such dwarf sorts as Chelsea Gem and William Hurst have been sown and are now through the soil, all the extra care that may be bestowed on them will be well repaid.—J. C.

Autumn Spinach.—With cooler nights and days generally, a sowing of this vegetable may now be made with every prospect of the crop doing well. A few weeks ago I recommended that the plots both for this and the winter batches be specially prepared, so that the roots might not be devoured by wireworm. For this autumn supply I would recommend a west border, if such can be spared, south borders being more suitable for actual winter Spinach. Make the ground very firm and allow plenty of space between the rows. Sow the prickly variety not too thickly, and thin out freely immediately the seedlings can be handled. The sowings for a winter supply may be made about August 12 or 15 in midland and northern districts, ten days later being soon enough in the south of England, another sowing following this about the second week in September for spring supply. It is strange that winter batches of this vegetable should be so much more liable to the attacks of wireworm than summer ones. I think many gardeners make a great mistake in always sowing it on the same border, imagining that a south aspect is alone suitable for it. Even if the border is long enough to allow of a change of ground, it is apt to become Spinach-sick. The fact is, on ordinary soils not too retentive of moisture and that are kept in good heart, winter Spinach will thrive quite as well on open quarters; indeed, I think that from the first it grows harder and is better able to withstand the inroads of frost than Spinach on a south border. Even where all due precautions are taken in preparing the ground to ward off the dreaded wireworm, a continual watch must be kept as growth proceeds, this pest often attacking the plants when 3 inches high. In such cases I would advise the use of the mixture recommended in a recent calendar for the Carrot grub. I have proved that the round summer Spinach will grow equally as well in winter as the prickly variety and eats more juicy. Where room can be spared, I would advise a sowing of each to be made, the certainty of a crop thus becoming greater. One thing needful with both autumn and winter batches is moderation in picking at first. If all the larger leaves are picked off as soon as ready, the plants sometimes get a check and are slow in producing afterwards: whereas piecemeal gatherings until the plants become strong and vigorous prevent this evil.—C. C. H.

Stove and Greenhouse.

MARKET PLANTS AT EDMONTON.

Although the charming groups of Ferns that are frequently seen at the R.H.S. meetings admirably illustrate the richness and variety of the great collection grown by Mr. H. B. May in his nursery at Edmonton, they cannot give the faintest idea of the enormous stocks of the popular market sorts that are growing in this nursery. One goes through house after house of Adiantums and Pterises, and sees them in countless numbers and in varied states from seedlings up to market plants in 4½-inch and 6-inch pots, each plant a perfect specimen of its kind. Every batch of plants is, as it were, a crop brought on to a certain state, then marketed to make room for more. Doubtless a very short period of life remains for tens of thousands of these Ferns after they leave the growers' hands, hence the constantly existing and, we may say, ever growing demand for them, as we noticed very great additions have been and still are being made to this establishment to meet the requirements of trade. But apart from this extensive culture of existing varieties for special purposes, other aims and interests are not ignored, as not a few really first-rate new and distinct Ferns have been raised or otherwise acquired and distributed from this nursery. As a market Fern the old Adiantum cuneatum still maintains its premier position, but preference is here given to a form of it named elegans, as it is hardier and grows more freely; to such an extent is this latter characteristic apparent, that in spring when batches of both are cut down the variety elegans outstrips the type in new and rapid growth. Two of the newer Adiantums, both charming and distinct as seen here, are A. elegantissimum with large, spreading, finely-cut fronds of the greatest elegance, and A. tenellum, which is more of the cuneatum type, but most distinct and robust. One house is entirely devoted to Adiantum Farleyense, which ever commands admiration from its rich luxuriance of graceful growth. Pterises have always been a feature of this nursery, and two varieties that originated here are now popular plants. These are P. cretica Mayi and P. c. nobilis, this latter an erect growing variety of remarkable substance and specially fitted for market work. A distinct advance in the crested forms is seen in the variety Mr. May is now sending out under the name of P. cretica Wimsetti and which obtained an award of merit at one of the early meetings this year. It is a tall and handsome grower, the tips of its long pinnules crested, as are those of other forms, but the broad pinnules branch laterally, and each of these side growths is terminated by a crest as well. There is no doubt it will become a popular kind, and it shows its distinctive character fully by reason of its robust and free habit of growth. P. Victoriæ is a variegated variety, but really pretty, the pinnæ having a distinct band of white down the centre margined with light green. This is comparatively new, but several different forms of it have already been obtained here, notably one called nivalis, which has fronds of a lovely shade of silvery white. Nephrolepis exaltata is one of the very best Ferns to grow in hanging baskets or suspended pots, and an enormous quantity of it is grown here.

N. davallioides is another first-rate kind with long and elegant fronds. N. plumosa is a charming crested form, and N. d. multiceps is most distinct, each frond being terminated by a branched and spreading crest cut into tiny segments. Another delightful Fern for pots or baskets and unique in its graceful silvery white fronds is Nothochlæna sinuata. Asplenium Mayi is a handsome variety, having bold spreading fronds of great substance, the pinnæ quite thick and fleshy, yet gracefully arching, finely cut, and of a shining deep green colour.



Rhododendron Dalhousiæ. (*See p.* 104.)

Palms

are largely grown here, especially Kentia Belmoreana, which is by far the most popular of all Palms for market work, and was seen in countless thousands from germinating seeds through all gradations up to a considerable size. The largest plants, particularly handsome, being short in the stem and still retaining their first leaves, were clothed with foliage practically to the pot. Cocos Weddelliana was the next most conspicuous Palm in point of numbers. Crotons in great variety are remarkably well grown, and although all of the usual marketable size, most noteworthy for their fine colours, which we never saw brighter in plants of the size. Carnations in pots, chiefly tree varieties, are another feature of this nursery, all the best sorts in quantity, especially Miss Joliffe, which in its particular colour still remains unique and indispensable. Several fine new varieties raised here were in flower, and we noted with satisfaction that instead of striving after great size, other more essential points have been considered, first of all a long and perfect pod which will not split. W. Robinson, bright scarlet; The Shahzada, deep crimson; Henry Gibbons, bright crimson; Mrs. S. Segar, full rosy pink, and Firefly, brilliant red, are all new kinds that will always bear flowers free from splitting or any defect of that kind. Veronica Purple Queen, of which a coloured plate was given in The Garden of June 16, 1894, is being tried as a market plant, and we saw three very large batches of it, the forwardest just coming into flower. Other plants now extensively grown are Aralia Sieboldi, which, formerly given greenhouse or frame treatment throughout the year, is now treated entirely in the open air during the summer months, Bouvardias and double Primulas for winter blooming, with Erica hyemalis, Cytisus racemosus, and Hydrangeas for the spring.



Rhododendron campanulatum. (*See p.* 104.)

Aristolochia elegans. — There have been many notes concerning the huge, quaintly marked blossoms of the Pelican Flower (Aristolochia gigas Sturtevanti), for which, however, a good-sized structure is necessary to show it off to the best advantage, while that at the head of this note (A. elegans) is well adapted as a climber for a small house, as the leaves do not obstruct much light and it flowers profusely. The blossoms, too, are so delicately marked, that a close inspection is necessary, and this, of course, is more readily done in a small structure than in a large one. The shoots of this Aristolochia are thin and wiry and somewhat sparingly clothed with pale glaucous green leaves. The flowers, on long stalks, have an abruptly bent tube, as in most other members of the genus, whilst the mouth of the flower is shell shaped and irregularly and quaintly marked with purplish red and creamy white in about equal proportions. The interior of the throat is yellowish, surrounded just at the mouth of the tube with rich velvety purple. The blossoms are without the disagreeable odour possessed by some of the Aristolochias, which is another point in its favour for small structures. It strikes very readily from cuttings put in at any time during the growing season, and so free-blooming is it, that I have seen pretty flowering examples in 5-inch pots. In this case the twining shoots were wound round a few sticks and then the plants flowered freely. In this way, however, they are not so effective as when grown on the roof of not too tall a structure. This Aristolochia is a native of Brazil and was first distributed in 1886. A coloured plate of it was given in The Garden, June 19, 1886.—H. P.

USEFUL WINTER PLANTS.

It is always gratifying for a gardener to know that he has a good healthy stock of winter-flowering plants coming on. Chrysanthemums are all very well so far as they go, but although, by striking the cuttings at various dates and growing them in small pots, they may be used for small vase and basket work in the drawing-room, other things are needed that will do service when the Chrysanthemums are over. How useful Abutilons are, Boule de Neige, Darwini superbum, and tessellatum being as good as any for winter use. These, if propagated in early spring and grown on in intermediate quarters until warmer weather warrants their removal to frames and finally to the open air, may be grown into nice-sized specimens the first summer, and if cut back the following spring and repotted when an inch of growth is made and given the same treatment as the newly-raised batch, will make large bushes that will come in most useful for table or sideboard work or even for grouping with other subjects at the foot of staircases, entrance halls, and similar places. The bright, distinct flowers of these Abutilons contrast most pleasingly with the glossy green foliage when well grown. A mixture of good fibrous loam, rather light than

otherwise, with a good percentage of leaf-mould and grit and a sprinkling of some approved fertiliser suits them well. If the plants become in the least pot-bound and another shift cannot be given, stimulants must be supplied, or the leaves soon turn yellow and fall. Scale and green-fly are rather partial to these plants, and soon bring about a sickly condition unless speedily removed. It is not all who have convenience for a good batch of winter-flowering Carnations, and unless ample time can be given to their wants during the summer months and a light airy house where they can be arranged close to the glass in winter, their culture had better not be attempted. At this season the plants, although standing in the open air, are liable to become infested with green-fly, this being difficult to reach, as the close overlying leaves at the tips of the growths shield it from all insecticides when applied in the ordinary way. I find the best plan is to go over the plants with tobacco powder, one man holding the growths open, while a second dusts them through a piece of tiffany or coarse muslin, syringing them well the following day. In watering the Carnations the happy medium must be aimed at, more particularly in the case of newly-potted plants. In times of heavy rains I have sometimes laid all the plants on their sides for a few days, as continued saturation will soon cause a yellow and sickly condition, some sorts, such as Miss Joliffe and Mlle. Carle, suffering sooner than others. Much feeding is not advisable, at least during their summer growth; in fact, I do not give liquid manure until the plants are in their winter quarters and well covered with bloom buds. The roots are very delicate, and I once saw a fine batch much injured by the man in charge giving stimulants of his own accord. A surface stir, to remove any accumulation of green and to admit air and sun to the roots, is necessary occasionally, and the watering should, where practicable, always be done by the same man. Libonia floribunda is a most useful decorative winter plant, and one that well repays good cultivation. Nice-sized plants in 4½-inch pots may be had in one season by striking cuttings early in January, a few old plants being cut back and placed in a brisk heat at Christmas to supply them. These plants make capital bushes if repotted and treated liberally the second season. If kept in the same pots the second year they seldom do well, being free-rooting. Although requiring an intermediate temperature during the earlier part of the year, Libonias do best after the month of May in pits or frames, where they can be aired according to the weather. When left in a close stove atmosphere green fly is constantly attacking them, and the leaves often turn yellow and fall off. When in free growth an occasional dose of diluted liquid made from sheep or cow manure helps them much, also vigorous syringings when the pit is closed on sunny afternoons. They must be taken into a temperature of 50° towards the close of September. There are few better things for the decoration of a warm conservatory or for basket and vase work indoors; in the latter case, however, the plants must be frequently changed, or the blooms soon fall. Loam, a little dried cow manure, and silver sand suit them well. The old Coronilla glauca with its showy pea-shaped flowers is one of the most useful plants that can be named for this season, doing well under exactly the same treatment as Chrysanthemums, except perhaps that the potting soil needs to be used in a somewhat finer state. Cuttings strike readily if taken off with a heel as soon as a couple of inches of growth has been made, and the old plants last for many years if repotted occasionally and top-dressed with good rich soil and manure. They may be left in the open air as late as Chrysanthemums, being then placed in a cool, light, airy position in the greenhouse or conservatory.

Begonia fuchsioides and B. weltoniensis, the latter a special favourite amongst those who have much indoor furnishing to do in winter, do best when potted in fibrous loam, a little peat, leaf mould, and silver sand or road grit, preferring, like the Libonias, a warm moist pit during the summer, where they can be treated to early closing and gentle syringings overhead. These will also bear and enjoy a little weak liquid manure once a week when the pots have become well filled with roots. Eupatorium odoratum and E. riparium are of very easy culture, rooting freely into a compound of loam, well-rotted manure, and rough sand. Plants which have grown one year should be cut freely back and repotted, cool treatment throughout suiting them best, with complete exposure from June to October. Although the Eupatoriums cannot be said to be very showy, the flowers are light and graceful, and last well in a cut state.

J. Crawford.

Double zonal Pelargoniums in small pots.—I have been surprised to see how profusely some double-flowered zonals have bloomed in a very limited amount of soil. A double white in a 4½-inch pot had twenty good trusses, and I counted upwards of thirty trusses of a pink variety on a plant in a 6-inch pot, and one in a 2½-inch pot carried fifteen good heads of bloom. They were potted just about a year ago for winter bloom, and have remained in a cool house, without change of soil, all through the spring, getting a dose of weak liquid manure from time to time. If I had to grow double zonals for conservatory decoration either in large or small pots, I should get them into a root-bound condition before they commenced to flower. They make stout, short-jointed wood, which produces flower-buds more freely than when the roots have fresh soil to work into during the spring months.—J. C. B.

Ruellia rosea.—Like many other Acanthads, the flowers of several of the Ruellias are very attractive, and the above-named species forms just now a bright and showy feature in the intermediate house. The flowers, which are borne in open clusters at the points of the shoots, are larger than those of some Ruellias, the tube being about 2 inches long and the expanded mouth of the blossom nearly 1½ inches across. The colour is a bright magenta-rose. True, the individual flowers do not remain long in beauty, but a succession is kept up from one cluster for a considerable time, and the plant grows and flowers continuously throughout the summer. Like all of its class it is of easy propagation and culture, for cuttings strike root readily enough. As is the case with many of its more immediate allies, the best results are obtained from young plants. A few other species of Ruellia well worth a place in any garden are R. Herbsti, R. macrantha, R. Portellæ for winter flowering, and R. speciosa.—H. P.

Soaking seeds.—On p. 55 some very good advice is given with regard to Everlasting Peas, and that is to soak the seeds in water for eight or ten hours (especially if the seeds are old) previous to sowing them. Such advice might be given concerning many other seeds, especially those with a particularly hard covering that take a long time to germinate. Cannas, for instance, grow in a very irregular manner if there is not a brisk heat at command, and to assist them in this respect one often hears the advice given to file the seeds previous to sowing them; whereas all the trouble and risk of injury to the embryo may be obviated and the same ends attained by soaking them for twenty-four hours in water which is slightly warm—that is to say, at about a stove temperature. I generally fill the pans in which the seeds are placed with water from the stove and stand them for twenty four hours on a shelf in the same structure, as by so doing there is not the risk that attends the use of hot water. I have treated the seed of several other classes of plants in the same way, the results being altogether satisfactory. Thus some seeds of tropical Erythrinas when soaked germinated in about a month, while others not soaked absolutely refused to grow. Some Australian Acacias, too, behaved in much the same way. One caution that must be particularly observed after seeds that have been treated in this way are sown is to see that the soil is not allowed to get dry, otherwise irreparable injury may quickly result.—T.

Books.

IN A GLOUCESTERSHIRE GARDEN.*

Any man who walks the mead,
In bud, or blade, or bloom may find,
According as his humours lead,
A meaning suited to his mind.
"Day Dream."—Tennyson.

In April of the present year I made a very pleasant pilgrimage to the historical garden at Bitton Vicarage, in Gloucestershire, and was amply rewarded. The garden is not a large one, being about an acre and a half in area, and in shape a parallelogram, or double square. As its genial owner tells us:

It lies on the west side of the Cotswolds, which rise, about half a mile away, to the height of 750 feet, and about 15 miles to the south are the Mendips. These two ranges of hills do much to shelter us from the winds, both from the cold north and easterly winds, and from the south-west winds, which in this part of England are sometimes very violent. I attach great importance to this kindly shelter from the great strength of the winds, for plants are like ourselves in many respects, and certainly in this, that they can bear a very great amount of frost, if only the air is still, far better than they can bear a less cold if accompanied by a high wind.

The garden then has the advantage of shelter; it has also the advantage of a good aspect, for though the undulations are very slight the general slope faces south; and it has the further advantage of a rich and deep alluvial soil, which, however, is so impregnated with lime and magnesia that it is hopeless to attempt Rhododendrons, Azaleas, Kalmias, and many other things, and it has the further disadvantage of being only about 70 feet above the sea level, which makes an insuperable difficulty in the growth of the higher alpines. On the whole, the garden is favourable for the cultivation of flowers, and especially for the cultivation of shrubs, except those which dislike the lime.

The garden is in many ways an ideal one, lying deep down in a happy valley and forming with the noble old church the focus spot of an old world village. In some of the cottage gardens passed on my visit I saw the common white Lily in splendid healthy clumps and masses, and the quaint tortoise-shaped Yews in front of one creeper-laden old cottage seemed like relics of mediæval England. I saw the Vicarage garden on a showery April day with larks singing and swallows flitting around the house and amongst the trees, and the cuckoo and corncrake were vocal and happy in the adjoining meadows of lush grass and budding hedges. It is a quiet, peaceful garden of grass and trees and simple borders, and every nook and corner has its appropriate flower; in a word, it is just such

* "In a Gloucestershire Garden." By the Rev. Henry N. Ellacombe, M.A., Vicar of Bitton and Hon. Canon of Bristol. Illustrated. London: Edward Arnold, 37, Bedford Street, Strand. 1895.

a garden as one would expect a scholar to possess who has sympathy for all that lives or breathes and who has given us such a book as "The Plant Lore and Garden Craft of Shakespeare" in addition to the exquisitely reserved work now before us. The garden at Bitton Vicarage is no new garden, for it was famous more than half a century ago, when Haworth and Herbert, Anderson, Falconer, Sweet, Baxter and others took such an interest in bulbs and hardy flowers. By the same token it is by no means a new-fangled garden; there is all due and proper keeping, but it is patent to any plant lover that its owner thinks more of seeing his plants happy and healthy than he does of any unnecessary trimness or of neat and formal precision. Nay! he has even some sympathy and reasonable toleration for the more useful and beautiful garden weeds.

But my object is to deal with the book before me, and I can promise all true gardeners much pleasure in reading its well-printed sheets. The book consists of 302 pages, including a good index, and it is divided into two parts. The first part is devoted to a pleasantly-written calendarial record of the months of the year, with notes on the seasonable flowers, and trees, and birds, &c., that go to make a garden such a perennial delight. The second part comprises some charming little essays on spring flowers, shrubs, Roses, Lilies, climbing plants, garden walls, autumn leaves, Palms and Bamboos, Brambles and Thistles, trees in the garden, birds in the garden, garden associations, garden lessons, and parsonage gardens *ad clerum*. The illustrations are mostly very pretty ones of the allegorical kind, and I believe I have seen them in another place; still they are a welcome addition to a good book. The scholarly and suggestive little volume owes its existence, we are told in the preface, "to certain papers of mine which were published in the *Guardian* during the years 1890 to 1893," and it forms another stone in that beautiful arch of garden books that have appeared of late years, such as Mr. Bright's "Year in a Lancashire Garden," the chronicle of a year chiefly in a garden; Miss Hope's "Gardens and Woodlands"; the Hon. Mrs. Boyle's "Days and Hours in a Garden"; and Forbes Watson's "Prose Studies of Flowers"—all delightful successors to Alphonse Karr's classical "Tour Round my Garden" and of Charles Dudley Warner's "My Summer in a Garden," two books that should be read by everyone who tills the soil.

We gardeners by profession must all tender our grateful thanks to Canon Ellacombe for his delightful contribution to the literature of the garden, and even if the work contained nothing but the last essay on parsonage gardens we should feel a threefold link of twisted golden wire between himself and the ever venerable George Herbert, for what Herbert did not attempt for us the present occupier of classical and beautiful Bitton has well supplied, and I hope the author will pardon the reprinting as a quotation of what I believe to be the literary gem of the work, viz., the *ad clerum* essay on parsonage gardens.

I often regret that George Herbert did not add another chapter to his "Country Parson," and tell us his views of the parson in his garden. With his high views of the importance of the parson's character showing itself in the minutest details of daily life—"he leaveth not his ministry behind him, but is himself wherever he is"—it would have been pleasant to have been taught by him how the parson could manage his garden, not only "in the knowledge of simples, wherein the manifold wisdom of God is wonderfully to be seen," but also "like a parson, thus raising the action from the shop to the Church." That he had not only a love of flowers and gardening, but also a full knowledge of them, is shown by many passages in his poems; and in the chapter on "The Parson's Completeness" he considers a knowledge of plants to be necessary in a parson—that he would be incomplete without it.

And a country parson without some knowledge of plants is surely as incomplete as a country parsonage without a garden. Certainly he deprives himself of much pleasure, and in some respects of usefulness. I am thankful that my own lot has been cast for me in the country, yet I can fully understand and appreciate the actual pleasure which an active earnest clergyman finds in the crowded, unlovely streets, and even in the slums of a densely populated city cure, and I can even sympathise with his dislike to the quite stagnation (as he would call it) of a country parsonage; but I cannot understand a clergyman whose lot has been cast in the country, and who has accepted the lot, shutting his eyes to all the beauties which surround him and which come up to his very doors, and to whom the change of seasons, and even the changes from day to day that he must see, are only changes from one kind of dulness to another. Such a man must be wretched in a country parsonage, but I have not much pity for him.

I need not describe the ideal English parsonage and its garden. It has been described over and over again, and indeed it has passed into a proverb, so that when a house is described as "like an ordinary English parsonage," as Wordsworth's home is described, we know at once what it means. We picture to ourselves a building of moderate size—not pretentious—neither a mansion nor a suburban villa (*Parva sed apta domino* is the inscription on an old Wiltshire parsonage), and of an old foundation; yet with many additions and accretions of different dates, each bearing some impress of the successive owners; and the garden is of the same character, often standing (and always in the ideal parsonage garden) near the church and churchyard, so that the church forms the feature in the garden. The parsonage garden is not large, seldom exceeding two acres, and more often not exceeding one, with little glass, and no pretension to a high-class garden, but with a good spread of old lawn and many old trees and flowering shrubs, all suggestive of repose and quiet, pleasant shade, and freedom from the bustle of the outside world. The parsonage garden some years ago was a home for hundreds of good old-fashioned flowers, but I am afraid no gardens suffered more from the bedding craze, which swept them clear of all their old long-cherished beauties, and reduced them to the dull level of uniformity with their neighbours' gardens, or to miniature mockeries of Trentham or Cliveden. That craze has to a great extent passed away, and the parsonage gardens are gradually recovering their old features, and fortunately they are able to do so more easily than some other gardens, because in most of them the trees and shrubs were spared, and have been a valuable help in the restoration to a better and more healthy style of gardening, and one more in keeping with the character of the country parson's garden. There are hundreds of such good old gardens scattered throughout England, of which Charles Kingsley's garden at Eversley and White's garden at Selborne are well-known typical examples.

That such gardens are a real pleasure and refreshment to the owners we all know, and they are none the less so when the refreshment is taken in hard manual labour, for many a country parson can bear witness that "the very works of and in an orchard and garden are better than the ease and rest of and from other labores" (William Lawson, 1608). But I said also that parsonage gardens had their usefulness, by which I mean they may be made useful to the clergyman in his parochial work. How this may be done I need not say at any length, because the method that would be very useful in the hands of one would be perfectly useless in the hands of another. I would only say generally, that the love of flowers and gardening is so universal amongst the English peasantry, that a country parson will often find a better introduction to a cottager through his garden than by any other means. And though the love of flowers is so universal, and the garden may be such a useful adjunct to the cottage, yet there is very great ignorance of the right principles of gardening, and the parson may be of great use to his poorer neighbours, not only by teaching, but still more by showing them better ways in his own garden. For the parsonage garden gate should be always open, and every parishioner welcomed; there need be no fear of any undue advantage being taken of the free permission to enter—the one difficulty will be to induce them to come in. And the parson may do much to brighten the gardens of his parish, and so to increase the interest in them by giving plants from his own garden. I have for many years been a cultivator of hardy plants, and have been able to gather together a large number of species; and I was long ago taught, and have always held, that it is impossible to get or keep a large collection except by constant liberality in giving. "There is that scattereth and yet increaseth," was Solomon's experience, and it certainly is so with gardening; and the parson who is liberal with his plants will find the increase not only in the pleasant intercourse with his neighbours, but also in the enlargement of his own garden, which thus spreads beyond his own fences into the gardens of the cottages. Some clergy can do more than this by giving actual instruction in the wonders of plant-life, as was done some years ago most successfully by Mr. Henslow, and also by Mr. Dawes, the Dean of Hereford, who gave object lessons in his garden at King's Somborne; but this requires a special knowledge, and these two men were specially gifted with great knowledge, and with the happy power of imparting their knowledge to others.

There is one way in which I am sure the country parson might make his garden useful to himself in his ministerial work:—

> I am not in the least ashamed (says the Rev. John Laurence in "The Clergyman's Recreation" in 1714) to say and own that most of the time I can spare from the necessary care and business of a large parish, and from my other studies, is spent in my garden, and I cannot but encourage and invite my reverend brethren to the love of a garden, having myself all along reaped so much fruit both in a figurative and literal sense.

The figurative fruits are the spiritual lessons he had learned from his flowers and garden; and I think the old writers and the old gardeners were more alive to these lessons than we are now. St. Francis de Sales was very fond of drawing his illustrations from flowers, and his notices of flowers and their lessons have been collected into a "Mystical Flora." Joachim Camerarius, an excellent botanist, published in 1590 a "Centuria of Emblems" from plants; and with its pretty plates and excellent scholarly and religious descriptions it makes a charming little volume. In 1657 Ralph Austin, "practiser in the art of planting," published "The Spiritual Use of an Orchard or Garden of Fruit Trees set forth in divers similitudes between Natural and Spiritual Fruit Trees," in which, though the similitudes are often far-fetched and the lessons strained, there is much that is well worth reading. In our own day, "The Catholic Florist" (1851) is a pleasant little book on the spiritual lessons of flowers, and their associations with different saints and saints' days, though sadly marred by fictitious quotations; and later still we have had similar lessons pleasantly taught us by Mrs. Gatty and Mrs. Ewing.

Much might be said on the great pleasures that the science of botany will give to a country life, and much more might also be said on the special advantages of a knowledge of the science and the practical uses of a garden to the country parson, but I will content myself with some words of others who have written on the subject. I have already mentioned "The Clergyman's Recreation," by Laurence. It is a good little book, but, except in the preface, has little specially for the clergy. The preface is, however, written *ad clerum*:—

To recommend the art of managing a garden to those of my own order, the clergy, not to make them envied by magnificence, but to make them happy by loving an innocent diversion suitable to a grave and contemplative genius. . . . . This, I suppose, most people will allow, that as there are some sports and exercises not suitable to a divine, so gardening is a very agreeable and commendable recreation—viz., pruning, planting, sowing, grafting, and innoculating, and sometimes digging, *ad ruborem*, but not *ad sudorem*.

In 1796 "Three Dialogues on the Amusements of Clergymen" was published, professing to be the views of Bishop Stillingfleet communicated to Dr. Josiah Frampton. It is rather an amusing book, and can scarcely be taken seriously, but is quite worth reading. All amusements are more or less forbidden, except battledore and shuttlecock in the tithe barn. Gardening naturally forms one of the subjects of discussion, and he has little to say about it except that "there cannot be a more clerical amusement," but he gives the good advice that the clergyman should try to make his garden the best in the parish, a model garden to his neighbours.

But the best book on clerical gardening is "The Manse Garden," a book published nearly seventy years ago, and now, I believe, out of print, but well worth reprinting. The author was the Rev. N. Paterson, at that time minister of Galashiels, and afterwards a leading member of the Scotch Free Kirk. It is altogether a delightful book, full of quaint sentences, shrewd good-sense, and quiet humour, and the cultural directions are admirable. I mention it more particularly here because throughout the book the clergyman is never lost sight of, and though written for Scotch ministers and Scotch manses, it is equally suitable for English country parsons and country parsonages. The one chapter on "The Minister's Boy," which concludes the book, will come home to many an English country parson. There are many passages which I should like to extract showing the pleasant humour and practical character of the book, but I must content myself with one in his more serious strain as having a closer reference to my subject, and showing something of the ministerial aspect of the book:—

> You will find in the very nature of the work a new interest communicated to your life, and which, relieving the pressure of cares and lightening the burden of toil, will tend to no worldliness of spirit. Thus conferring as well as receiving good, and incurring no evil, let our gardens and every corner of our glebes be adorned; and if we have to lament, on the part of those having large possessions, that too little is done, let us at least set an example, though it be but in the model style, and have our home a paradise of fruit and flowers, of shelter and shade, endeavouring still to make the place more worthy of ourselves, and ourselves more worthy of the place.

One point must not be left unnoticed. It seems almost unnatural for a country clergyman to be without some love of flowers and gardens; and the study of them comes recommended not only as a refreshment and from its practical usefulness, but also for its scientific and literary associations. Yet it has its snares, of which the chief is that it may become too interesting and too absorbing. Its very innocence may help on and even conceal the snare; but the snare is there as it is in everything else in this world, however good.

F. W. Burbidge.

POSITION OF HOT-WATER PIPES IN FRUIT HOUSES.

The position of hot-water pipes in vineries, Peach, and other fruit houses has, I think, a very important bearing upon the vines and fruit trees growing in their vicinity. Formerly they were kept all together and principally round the fronts of lean-to houses, a single flow and return being taken from the back under the door-sills, and then branched into two flows and the same number of return pipes. Then came a change in the style of houses built, three-quarter span-roofed and span-roofed structures largely superseding lean-to's. This necessitated an alteration in the system of arranging the hot-water pipes, a greater distribution, rather than massing them together, being practised, and so well has this been found to answer, that market growers now-a-days favour that arrangement for small as well as large houses. When the flow pipes are kept well apart from the returns and only a few inches higher, a much better circulation is maintained than formerly, the flows seldom becoming many degrees hotter than the returns; whereas by the old arrangement there was far too much disparity between them. This is a decided advantage in favour of distributing the pipes, nothing proving more prejudicial to plant life than being confined in an atmosphere from which a few overheated pipes have extracted the moisture. More often than not these over-heated pipes are very near to the stems, and who shall say that much harm has not resulted from this proximity? If the stems are not injured, it is yet very certain that innumerable bad attacks of red spider have started immediately over the hot water. It is from this point of view, or the effect of any arrangement of hot-water pipes, that I propose to base my arguments for or against any particular method, leaving the more debateable portion of the subject, viz., the why and wherefore of any particular system of heating failing or succeeding, to those of a more scientific turn of mind.

That much good fruit has been, and still is, grown in vineries and other fruit houses where the pipes are massed near the fronts of the houses cannot be denied, and for some reasons that plan can still be recommended. Where so many have erred is in not keeping them well away from the walls, and at least 6 inches clear of the border. When Vines have to be brought in from an outside border, and there is only just enough space to keep them clear of the hot-water pipes, that is bad enough, but when not more than 6 inches separates the pipes from the wall, and Vines are planted in an inside border at the back instead of the front of the pipes, then there is a great blunder committed. In my first place as head gardener I found the Vines in that predicament, and, what made matters worse, the return pipes were half buried in the border. As a consequence all the surface roots that attempted to form never got beyond the pipes, and, as I found them, were so many blackened sticks. Watering every time I entered the house did not mend matters much, and it was small matter for surprise that a great inside border was next to useless, the bulk of the Vine roots being away out foraging for themselves. Since then I have come across numerous instances where concentrated as well as single pipes were far too close on the border or else much too near the stems. In some cases the borders are quite humpbacked, the lowest parts being near the pipes along the fronts and in the centre of the house. Little cause for wonder is it that Vines or any fruit trees thus circumstanced fail to do well owing to want of moisture at the roots. Once the hot-water pipes dry the soil immediately about them, trying to remoisten it appears to be a waste of labour. The remedy lies rather in raising the pipes and a change of soil. Unfortunately, shifting pipes with their joints packed in the old-fashioned way, or with rusted iron filings, many of which are already cracking or on the point of doing so, owing to the expansion of the rusting iron, is a very ticklish and, in the case of concentrated pipes, a very difficult proceeding, but single rows with expansion joints, or stopped with india-rubber collars only, can be raised gradually and safely. It does not cost so very much to re-arrange the hot-water pipes, but many gardeners have to do the best they can with existing arrangements, as little extra expense being incurred as possible. If, then, the pipes cannot be raised or re-arranged, the best way out of the difficulty is to lower the border so as to bring it to a lower level generally and well away from hot-water pipes. It is level and not sloping borders that are wanted inside houses, nothing being gained by sloping to either the front or back, while slopes are a great hindrance to watering operations.

Hot-water pipes, wherever located, are almost certain to be in the way sooner or later. If they are not, then they are fixed where some or much of the heat given off is wasted. Where, perhaps, they are least in the way, at the same time doing the least harm, is when concentrated not less than 3 feet away from the front walls of vineries, a trellised pathway coming next to the pipes. This arrangement admits of inside planting being done properly, and if the pipes are kept well clear of the border, the roots will spread uninterruptedly into the body of the house. In this position, again, lifting and relaying the roots in fresh soil can be done without much difficulty. Against this plan we have the fact that distributed pipes heat more equally, but at 6 feet or less apart all over the house they are much in the way at times, and it also means the construction of a considerable number of brick piers for supporting them, other than where they can be slung up, market grower's fashion, to strong wooden roof supports. Plenty of these distributed pipes are arranged far too low. If scarcely clear of the surface at the outset, the soil may sink quite clear of them in a few months, but market growers' borders do not sink a great deal, but, on the contrary, liberal surface additions soon half bury low-lying pipes.

In Peach houses hot-water pipes are more often in the way than they are in vineries even. They ought never to run just in front of the stems of the trees, not only because it is bad for the stems and the foliage, but more especially they make it very awkward for lifting and transplanting the trees at any time. I have helped to move scores of trees that had nearly all their roots below and the branches above the pipes, and in order to get the tree clear of the impediment, the top had to be depressed to near the ground, and the roots drawn out and over the pipes in the best way we could manage. Moving with a ball of soil about the roots under such circumstances was quite out of the question. It was equally awkward when large trees were brought in from an adjoining house or from the outside and replanted. If the pipes must run near to the front wall, then I would advise planting trees with a clear stem long enough to reach to the roof trellis and well away from the fronts. Some of the finest trees in the country, including those, if I remember right, at Syon House, are of that description and planted as I have just advised. In any case care should be taken to so arrange the hot-water pipes as to give a fair clear course to the trees and their roots, so that there be no difficulty in keeping the borders well moistened or in lifting whenever necessary.

In comparatively narrow Cucumber and Melon houses I have tried arranging all the top heat pipes against the front and back walls, and have also arranged them in separate rows, the flows running very close to the back walls, and the returns on the top of the walls on each side of central sunk path. The heat is kept up better by the latter arrangement, and none of the pipes get so hot as the flows are apt to do when the returns are immediately under them, red spider being less troublesome accordingly. Distributed pipes in Tomato houses 14 feet and upwards in width are somewhat in the way of trenching and cropping with Potatoes and Kidney Beans by way of "snatch" crops, but I have tried concentration and also distribution, and have somewhat reluctantly come to the conclusion that the former plan is the better for the Tomatoes. So very evident is this, that distribution of the pipes is taking place in several houses where they were previously arranged one above another. W. Iggulden.

Notes from Ware.—Now that the various plants in the garden and pleasure grounds have had time to recover, one will be better able to form a correct estimate as to what effect the two extremes of cold and heat had on shrubs, Roses, &c., in the comparatively short space of six months. The deaths among Roses in this part of the country are few, the Teas having suffered most, and in fact are still suffering, for scarcely a week passes but I notice a branch on one or other of

the varieties going. This is also noticeable on the cluster varieties, they having been weakened in the first instance by the frost, and have been unable to keep up that vitality required to carry them over the growing and blooming stages under the all-absorbing influences of excessive heat and drought. The Hybrid Perpetuals have got over the difficulty very well, but the flowering period has been of short duration. The various kinds of shrubs have been more or less crippled; some have never started into growth, viz., Laurustinus, Aralia Sieboldi, newly-planted Mahonias, Andromedas, Euonymus variegatus, Garrya elliptica, Hydrangeas, Olearia Haasti and Veronicas. Cedrus Deodara was rendered quite unsightly by the frost, followed by a scorching sun. The Sequoia sempervirens also looked very much injured. The Evergreen Oak looked as if it had succumbed altogether.—A. WALLACE, *Poles Gardens, Ware.*

NOTES OF THE WEEK.

Carnation Duchess of York.—I was much struck with this pretty Malmaison pink self, which is in excellent condition at Jackman's nursery, Woking. The blooms are of medium size and well formed, as well as highly fragrant. It grows freely—a necessary point in the case of a border variety.—H.

Gladiolus brenchleyensis and the Cape Hyacinth planted in mixture fill a very large round bed at Kew and make a fine display of colour, effective even at a considerable distance. The arrangement, too, is suggestive, as there are many good hardy flowers worthy of the same bold treatment if rightly selected and suitably planted.

Eucryphia pinnatifolia.—This handsome shrub withstood the past winter in the open at Kew, and a group of it is now conspicuous with many fine flowers. They are like large single Roses, but have thick petals of a pure white colour and a prominent tuft of long graceful stamens. So beautiful a shrub is worthy of a good place, and it is all the more valuable for its late season of flowering.

Gentiana adscendens is a charming species, now flowering and apparently quite at home in a poor stiff soil. It has some resemblance to G. asclepiadea, producing its flowers from the axils of the leaves upon the upper half of the stem, but is easily distinguished from this latter species by its clear bright blue flowers of a rich and exquisite shade of colour. Such a beautiful Gentian ought not to be so rare in gardens as it is.

Magnolia glauca, which has been recently noted as flowering at Knap Hill and Kew, is also in bloom at Stisted Hall, Braintree. It is 16 feet high, the trunk measuring 28 inches in circumference. Other Magnolias flourishing here are M. Soulangeana, 8 feet high; M. macrophylla, 30 feet; and M. conspicua (Yulan), a trained specimen on a wall 10 feet in height and 11 feet in breadth.—B. ROGERS, *Stisted Hall, Braintree.*

Arundinaria nitida is a graceful and most distinct Chinese Bamboo now very conspicuous in the Kew collection, where it weathered the winter as well as any kind. It has long, slender canes, well clothed with small narrow leaves, whilst those of the present season's growth that have not yet cast their sheaths are of a distinct purplish hue. It is a most noteworthy addition to the really hardy kinds.

Hypericum Moserianum should become a popular dwarf shrub, as it is as free in growth as the old H. calycinum, but much more beautiful and lasting in bloom. It looks well at Kew, especially in one bed that is filled entirely with it—a sheet of rich colour with hundreds of buds yet to expand. A distinct feature of its flowers is that the petals remain and keep their fresh bright colour after the stamens have fallen.

The Shrubby Cinquefoil (Potentilla fruticosa) is generally recommended as a shrub for dry banks, but we were charmed with a little bed of it on the grass at Kew. The verdure of the surrounding grass seemed to add much to its beauty, and it might certainly be grouped with advantage in good soil away from larger shrubs. It blooms profusely over a long season, and the flowers, though small, are most effective in their rich yellow colour.

Symphyandra Kaufmanni, mentioned at p. 76, should be S. Hoffmani. It was named in honour, I believe, of Lt. Hoffman, of the Austrian army. In addition to its being a good hardy border plant, though only of biennial duration, it is a first-rate wall plant—in fact, a good deal of my stock is now permanently located on an old stone wall, to which it has moved from the border; a mortar joint seems to supply all its needs. This plant has also been distributed under the name of Campanula sibirica.—T. SMITH, *Newry.*

Primula capitata.—A little group of this fine Primrose is the most attractive feature at present in the rock garden at Kew. It is beautiful alike in leaf and blossom, its mealy leaves spreading out over the ground, and its dense heads of flowers borne erect on stout stalks. Its flowers are of the richest purple colour, varying in depth of tint, but always charming in contrast with the white mealy buds. It cannot be called a good garden perennial, but it is advisable to raise a batch each year, so as not to be without so fine a species, whilst its late flowering is another point in its favour.

Tufted Pansies from Scotland.—Mr. J. Forbes sends us from Hawick a nice fresh lot of these charming flowers, comprising the best of the older kinds, like Duchess of Sutherland and Marchioness of Tweeddale and the new Violetta kinds in rich variety and varied colours. Some of the best of the latter were Cordelia, cream-white, with rich yellow eye; George Lord, deep rich yellow; George Muirhead, pale yellow; Sweet Lavender, mauve; Blush Queen, a delicate mauve; Picotee, white, with faint blue edge; Ophir, yellow; Jennie Turnbull, lavender, with white eye; Oriole, pale primrose; Gnome, cream, shaded golden yellow; and Blush Queen, delicate mauve.

Francoas at the Birmingham Botanic Gardens.—I have rarely seen F. ramosa in better form than it is at the present time at the Botanic Gardens, Edgbaston. It has thrown up very strong stems, bearing huge branched spikes of pure white flowers, which are very attractive. F. sonchifolia (the Sow-Thistle-leaved Francoa) is worthy of culture, though not so showy as its relative. The spikes are dwarf, unbranched, pink in colour, with a dark spot towards the base. F. appendiculata is often confounded with F. ramosa, but it is quite distinct from it, the flowers pale red, and also marked with a darker spot on the petals, the racemes of bloom compact. All three are very attractive greenhouse plants.—R. D.

Delphinium cardinale and D. Zalil are both flowering in the herbaceous grounds at Kew. D. cardinale grows very tall, and has bright red flowers almost identical in size, shape, and colour with those of the dwarf D. nudicaule, but in its thin and scattered growth there is not much to recommend it as a garden plant. D. Zalil is about a yard high, and, branching freely, bears pretty spikes of pale sulphur-yellow flowers. From what we have seen of the new yellow-flowered hybrid varieties there appears a strong resemblance to this species, which may probably be one of their parents. If we could get the colour of D. cardinale into good perennial kinds it would be a great gain.

The weather in West Herts.—During the past week the weather has remained, as a rule, cold for the time of year both during the daytime and at night. The temperature of the soil at 2 feet and 1 foot deep now stands at 62°, having fallen 2° since the beginning of the month. Some rain has fallen on every day as yet this month, and to the total depth of nearly 1¼ inches. Of this amount over half an inch has already come through the heavy soil, and about half an inch through the light soil percolation gauge. The winds, which have been rather high, have come almost exclusively from some point of the compass between south and west.—E. M., *Berkhamsted.*

RETIREMENT OF MR. A. F. BARRON.

THE retirement of Mr. Barron from the Chiswick garden of the Royal Horticultural Society of London (after a service of considerably more than a quarter of a century) marks an epoch in its history as one of the centres of scientific horticulture in this country. For many years Mr. Barron has been a staunch and loyal official who has worked strenuously, even in the face of many difficulties and when environed in doubts and uncertainties of many kinds. Through all vicissitudes and unpleasantness Mr. Barron always acted firmly and wisely, and that he did his best for the society he served has been proved over and over again by the publications relating to the Chiswick garden in the society's journal. Placed in a most onerous position, the superintendent at Chiswick was brought into contact with all sorts and conditions of men, and he made many friends among gardeners generally. I may say fearlessly that no one alive to-day possesses such a full and accurate knowledge of hardy garden fruits and fruit trees as does the subject of this notice, and so far, even if no further, his retirement from Chiswick will be a loss not easily regained. The Apple and Pear and other hardy fruit reports of the society and "Vines and Vine Culture" are well-known works due to Mr. Barron's practical and literary ability, while the living and growing interest he has taken in the Gardeners' Orphan Fund entitles him to the gratitude not of gardeners only, but of all interested in the future of children left alone in the world. As an old pupil of Mr. Barron in the Chiswick garden before it was restricted in its area and scope as now, and as a friend since that time, I think that all gardeners will feel it a personal privilege and pleasure to wish the retiring superintendent God-speed and a happy and quiet period of comparative rest after so long, laborious and honourable a career.

My own notion of a testimonial would be a subscription, and if the funds were sufficient either to purchase a life annuity or to present him with what the poet craved, viz., "a small house and a large garden." The form of our respect is, however, immaterial; the main thing is to do something, and to do it quickly and thoroughly. That the Royal Horticultural Society of London will do their best for their oldest and most loyal official goes without saying, but Mr. Barron has really effected great and permanent services not only to gardeners, but also to the country at large, so far as fruit and vegetable culture is concerned. "Honour to whom honour is due."

F. W. BURBIDGE, M.A.

Royal Horticultural Society.—The next meeting of the Royal Horticultural Society will be held on Tuesday, August 13, in the Drill Hall, James Street, Victoria Street, Westminster, at 3 o'clock. A paper by Mr. A. B. Freeman-Mitford on "Hardy Bamboos" will be read.

Bog gardens.—We should be grateful to any reader who would tell us of successful examples of these, with some account of their most beautiful inhabitants. Photographs of such gardens would also be most welcome.

Names of plants.—*W. Eastwood.*—A very fine form of Odontoglossum luteo-purpureum.——*B. Rogers.*—Pentstemon barbatus.——*A. E.*—1, Œnothera Lamarckiana; 2, Œnothera biennis.——*S., Dublin.*—1, Sollya heterophylla; 2, Phytolacca decandra.——*W.*—1, Taxodium distichum; 2, Rhamnus alpinus.——*A. Palmer.*—Helianthus rigidus.——*C. H. Fisher.*—Veratrum nigrum.——*R. C. Chayter.*—1, Œnothera Fraseri; 2, Œnothera biennis.

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"This is an Art
Which does mend Nature; change it rather; but
The Art itself is Nature."—*Shakespeare.*

FLOWER GARDEN.

HARDY PLANT COLLECTING.

Some weeks ago a correspondent, Mr. A. Bullen, suggested the employment of a collector of hardy plants in some rich and suitable locality on a co-operative principle, each subscriber to pay a certain sum towards the necessary expenses of collection, &c., and in return each to receive his proportionate share of the plants, bulbs, seeds, &c., secured. The suggestion is a good one, but perhaps a modification of the proposal may be made. There are now abroad in regions rich in hardy plants intelligent gentlemen, such as consuls and attachés, who would gladly employ native labour in the collection of the local flora if the costs of operations were guaranteed them. What I would suggest is the formation of a club or society, each member of which should guarantee to subscribe or to collect a certain sum annually to be expended in the collection and freightage of hardy plants, roots, and seeds. A secretary for correspondence (British and foreign) and other clerical work would be needed, and on this official would hinge in a great measure the success or failure of the enterprise. Still, I believe one or more amateur gardeners might be induced to take up this branch of the scheme. I believe that more could be done by utilising and interesting people now living in rich botanical localities all over the cooler latitudes or altitudes of the world than by merely sending a single handed collector to any one locality.

Now-a-days there are consuls, missionaries, agents and traders of intelligence nearly everywhere, and not a few of these do already collect specimens and seeds, &c., of plants and other natural history objects, though perhaps rarely in any systematic or organised manner. One of the first essentials would be to publish a short code of directions for distribution amongst residents abroad interested in the discovery and cultivation of new fruits, vegetables, and flowers. The plants desired should be indicated, and directions for their collection and transmission should also find a place. To some limited extent the machinery or organised communications of our British and foreign missions and other societies might be utilised.

As an example of the great results to be derived from resident collectors in their leisure one has only to point to the many lovely new bulbs, &c., introduced to Kew and other public and private gardens by Mr. E. H. Whittall, of Smyrna, and the late Dr. Jameson, of Quito.

The great Andean chain has yet to be explored by collectors interested in hardy or half-hardy vegetation. The same is in a great measure true of the highlands between Cashmere and Thibet. The Caucasus, the Balkan ranges, the Rocky Mountain passes, and the cold region of the southern pole no doubt contain many species and forms as yet unknown to our gardens. Amongst plants we should like to see alive there are many known in books and herbaria, but there are many more that have so far never been seen. Some of us would like such things as Lathyrus magellanicus, from the Straits of Magellan, or the curious Caltha dioniæfolia, a dainty Buttercup, having leaves suggestive of Venus' Fly-trap. Then there is the red Dryas, figured as Cowania plicata in Sweet's "Flower Garden" long ago, and now-a-days, when gigantic Gunneras are admired, we should like to cultivate the noble-habited Gunnera peltata, which grows on Robinson Crusoe's island of San Juan Fernandez. This remarkable plant is figured from a photograph in the narrative volumes of the great *Challenger* expedition, where we are told of its enormous leaves holding the rain water, as is done on a much smaller scale by Saxifraga peltata, a plant now commonly grown.

There is even yet much to be done in well-known places like Japan and Western America, and there is a rich field awaiting the hardy plant hunter in Siberia, Northern China, and Manchuria. But to send a collector well equipped to far distant places is a most expensive matter, and one full of risks and difficulties not readily foreseen. A better way would, as I believe, be to form a hardy plant club, to which club each member should subscribe £10 annually, and then try and interest collectors, consuls, missionaries, and trading agents who already live on the spot, so to speak, and who often welcome any pleasant and inexpensive way of spending their leisure time and discriminative ability. In any case, Mr. Bullen's idea is far too good a one to be entirely lost sight of, and I trust something practical may be the result.

F. W. B.

Dog's-tooth Violets.—In large spreading patches in the shrubbery, rock garden or woodland the quaint and beautiful flowers of this genus are very pleasing. Being for the most part cheap and of easy culture, they should be largely planted. So cheap indeed are some of the kinds, that they are well suited for carpeting the ground beneath such things as Azalea mollis, Andromedas and other such things. In these positions soil and situation are alike agreeable to them, and they flower freely year by year with no other attention than an annual mulching of short manure and leaf soil. Some of the choicer kinds would be equally well suited in these and similar places also, and possibly be safer. It is now a good time to plant these Erythroniums, and after so hot and dry a summer no further drying will be needed. Indeed, in any case prolonged dryness at the root is harmful to them, as they quickly suffer from dry rot, which is fatal. Where the patches have become crowded, lift, sort and replant at 3 inches deep in sandy loam with as little delay as possible. —E. J.

Triteleias.—Many object to these by reason of their odour, yet, apart from this, few dwarf bulbous plants are better adapted for massing for effect. Particularly effective is the white-flowered kind, and if given a good depth of sandy loam it will grow fully 9 inches high. Though upwards of twenty years ago, I well remember the remarkable vigour to which this kind attained in the Exotic Nurseries, Tooting. The plant was a favourite with the late Mr. Robert Parker, who made a feature of it by planting long, broad lines in one of the specimen beds. These beds (fully 150 feet long) had the two outer margins of this plant, other plants occupying the centre. In its season there were many thousands of blossoms of this white Triteleia of quite exceptional size and vigour, and thus seen they were very effective. —J.

The Madonna Lily.—It may interest some of your readers to know that my Madonna Lilies, which have been for several years very bad with the Lily disease, are this year quite free from it and in splendid foliage and bloom. I tried transplanting every year into new soil and every remedy I could hear of, without any result. The bulbs were so strong and healthy, I thought possibly the disease might be like that on the Potato, so I had them sprayed twice, once in April and again in May, with Strawsonite, half the strength used for Potatoes. It has been most successful. Three plants purposely left unsprayed are quite bare of leaves and the flowers very poor, while all those sprayed are in vigorous health. I also found it most successful on Lilium chalcedonicum, which has not flowered for four years and is now very beautiful. I should say that my garden is a very old one and there are no imported bulbs in it.—E. Perrin, *Knockdromin, Lusk, Co. Dublin, Ireland.*

Anemone fulgens.—Where this is grown in quantity it has no equal among dwarf early flowering plants for its brilliancy of colour. For this reason alone it is worth a place in every garden, planting it for the earliest display in a warm sheltered nook, or even providing frame shelter for it. In some soils, and especially those of a cold clayey nature, the tubers frequently deteriorate, and sometimes perish outright. In others, the tubers, while comparatively sound, fail to flower satisfactorily. Any that are thus inclined should now be lifted and dried thoroughly for two months at least. At the end of this time they may be replanted, using a good open and porous soil with sharp sand about the tubers. Experience will frequently dictate the best method to adopt in different localities. In some soils no doubt it will be advisable to lift the tubers each year, in others every second or third year. One of the chief drawbacks to retaining Anemone fulgens in the soil all the year round is the inclination to an early autumn growth. This in severe winters is cut completely off unless protected from the frost. Very few plants are more accommodating than this one, and it may not be generally known that the tubers of this scarlet Windflower will retain vitality for a whole year out of the soil, flowering fairly well at a reasonable time after planting. But success or failure in this is due entirely to the way in which the tubers are kept meanwhile.—E. J.

PLANTS FROM JAPAN.

I am importing some plants from Japan this autumn, and shall be very glad of any hints as to their treatment on arrival—Tree Pæonies, Maples, double Cherries, Plums, and Magnolia conspicua. —M. P. F., *Northumberland.*

*** The treatment required will depend to a certain extent upon the size of the plants and the purpose for which they are needed, and also upon the condition in which they arrive, as if small or in doubtful health, they should be potted, whereas in the case of good healthy specimens they may be planted out at once. In dealing with the different plants mentioned, I will take them as they occur on the list.

Tree Pæonies usually reach this country in good condition, as the stout, rather succulent nature of the plant enables it to stand a long journey better than many other subjects. The Japanese plants of the Tree Pæony are almost invariably grafted on to one of the herbaceous section (some form of Pæonia officinalis, I think), and imported plants have often several stout roots as thick as one's finger and a couple of feet long. If it is intended to grow them in pots for the embellishment of the greenhouse, as is done by many, they must of course be potted. Though the roots may be shortened back somewhat without injury, yet even then it will be found necessary to use pots larger than those employed for many other things. They may of course be planted out on arrival, but if this is intended, a very good plan is to lay them in for a little while, just to see the state they are in, and thus form a guide for their planting. Whether needed for pots or the open ground, it will be necessary to look them over very carefully and remove every sign of a sucker, as great numbers are pushed up from the stock, more particularly if the scion has received a check. Even when established, constant attention in the removal of suckers must be paid them, otherwise during the growing season the scion will be quickly choked up with shoots produced by the underground portion of the stock. If when unpacked these Pæonies are very

dry, a good plan is to soak them in water for two or three hours before anything else is done with them.

Maples, when unpacked, will often be found excessively dry, and a consignment I once received in this state, though the roots were soaked in water previous to potting, did not yield good results. This led me to try a further experiment, and having another lot to deal with, I tied them in a few bundles weighted with bricks and totally immersed them in a tank of water, where they remained about twelve hours. Then they were potted and placed in a cold house, exactly as the first lot had been, and they grew in a far more satisfactory manner, so from the result of my own practice I should say, most decidedly soak them previous to potting or planting out. Maples from Japan are invariably grafted, the stock employed being usually the typical Acer palmatum. Very frequently the stock is old and gnarled with very few fibrous roots, hence if it is intended to plant them out a good plan is to establish them in pots before doing so, as they then grow away without further check. The Japanese are very fond of grafting several kinds of Maple on to one stock, hence half a dozen or more distinct varieties are often to be met with on one plant. When in full leaf the effect is certainly curious, though, to my mind, much less pleasing than when each variety is kept distinct.

Double-flowered Cherries and Plums, if very dry, may be treated as recommended for the Maples, and can then be laid in in a sheltered place till they can be permanently planted, for the roots are generally so vigorous that in many cases they cannot well be potted, even if the plants are not in good health and it is desired to nurse them a bit. Should they die partially back, they, as a rule, quickly recover when the growing season comes round.

Magnolias had better be established in pots before they are permanently planted out, as if this is not done, they will often stand a long time before they start in a satisfactory manner.

One caution to be particularly observed is, that as the Japanese are remarkably fond of grafting, everything should be carefully examined previous to potting or planting, and as far as possible all embryo buds on the stock removed. For this same reason, even after they are established constant attention is absolutely necessary.—T.

ANDROSACE LANUGINOSA.

From an all-round point of view this charming alpine may be considered one of the most useful and beautiful of its race. Left alone it is rather straggling in its habit, but a good deal of this may be modified by regulating the shoots with a few tiny wooden pegs, thus forming it into more compact masses. But while its somewhat scattered style of growth may be taken as a defect on the one hand, it is on the other an undoubted advantage to the plant under cultivation. The majority of the species composing this beautiful genus of alpines have a cæspitose habit of growth, and this, combined with their dense and woolly nature, tends to make them short-lived at best in our uneven climate. Exceedingly beautiful all of them undoubtedly are, though this is of little moment when all one's endeavours are at times exhausted to accommodate them. But the plant under notice is quite an exception, being easily grown and most readily propagated. The decumbent stems are about 1 foot long and furnished with silky white leaves, the stems terminated by rose-coloured heads of flowers with yellow centre. Given half a dozen plants, there should be no difficulty in quickly forming quite large patches of it on the rockery, preferably in positions where when in flower some of the stems could trail over a ledge of rock. A rock garden, however, is by no means essential, as the growth is generally more abundant when planted on level ground. In this position, however, unless the ground be carpeted with small stones for the stems to rest on, the entire beauty of the plant is destroyed by heavy rain. Even in the rock garden some such protection is helpful in preserving the silky, silvery whiteness of its foliage and thus render it pleasing at all times.

The plant thrives well in sandy loam with either peat or leaf-soil added, while the addition of some burnt clay is also helpful. Propagation is best done by cuttings, employing the young points of the unflowered growths or, if quantity is required, the entire length of the flowering shoots may be utilised. Cut the latter into lengths 1 inch long, or, in other words, convert each two joints into a cutting, removing the lower pair of leaves in each case so as to permit of inserting them securely. Plant in very sandy soil or pure sand and kept moderately moist and not too close, the majority will root in a few weeks. Winter in the cutting pots and plant at a few inches apart in large patches in the rock garden or elsewhere in early spring in rather deep soil to ensure flowering the same year. There is also a white form—A. lanuginosa oculata, a very charming companion to the type and of equally easy culture. A pretty effect may be created by planting a mixture of the two. A few seeds may be had at times, but by far the quickest mode of increase is by cuttings, as suggested above. E. J.

FLOWER GARDEN NOTES.

Herbaceous plants and annuals in judicious mixture are entering largely this year into the summer arrangements for the flower garden, and if the annuals continue to improve as in the last few years, it is safe to prophesy that in a very short time these will oust all those things whose cultivation necessitates a considerable amount of propagation in autumn and house room during the winter months. It must be remembered that all annuals chosen for such work must be thorough stayers; it is useless planting or sowing anything whose beauty is likely to be on the wane before the season is half over unless there is material at hand to refill the beds. Some of the prettiest beds I have seen this year were filled with scarlet Lobelia and Gypsophila elegans. The latter is a very beautiful annual, having the habit and good constitution of G. paniculata, the individual blooms being larger and slightly tinged with pink. The seed may be sown in the beds where the plants are to stand if this is practicable, and thinned out to the required distance or in prepared beds under cover and carefully transplanted. Owing to the very branching habit of the plant, thick planting is not advisable. The vivid colour of the comparatively new Toadflax (Linaria reticulata) makes it a capital plant with which to carpet beds already thinly planted with the white Tobacco, or it can be associated with a silvery foliaged plant of similar height as some of the Veronicas, the rosy Campion or the variegated Dactylis. Lots of combinations of a similar nature can be effected with the aid of annuals and herbaceous plants to suit the taste of the planter, alike with dwarf, medium height, and tall plants, only it must be remembered, as hinted above, that the annuals must not be short-lived, and that if this objection is applicable to any herbaceous plants that are used, there must be a set-off in the way of ornamental foliage that is not likely to go to the bad until quite the end of the year. Colours, too, are furnished by annuals in variety not to be found among ordinary bedding plants. Beds of single and double Gaillardias, for instance, are just now quite unique, and they possess the merit of flowering well until quite the end of the season. For a glowing mass of colour, few things equal the Calendulas; they will flourish in any odd corner, only, as in the case of Violas and Sweet Peas, they require a little extra attention in the way of prompt removal of dead flowers in order to obtain a regular and well-sustained display.

Phlox suffruticosa.—The suffruticosa section of Phloxes has been later than usual this year, possibly owing to the fact that they were late starting into growth, and they are now (August 9) only just getting past their best. I do not know if the majority of Garden readers who grow this family—or rather this particular section of the family—have tried Snowdon; if not, I should strongly advise them to do so, as it is one of the very best white flowers of midsummer. It throws a very fine, heavy spike of pure white flowers, individual pips being large and firm. We have to thank the raisers of new Phloxes for those characteristics in size and firmness of pip. There is a wonderful difference in this respect between these new varieties and the flimsy white and rose-coloured shades of twenty-five years ago. A good point in the Phloxes, and, indeed, in the majority of the big families of herbaceous plants, is the ease with which they can be increased either by division or cuttings. If the cuttings are not taken until rather late in the year they will strike the more readily if put in pots.

Tufted Pansies.—In answer to the query on page 84, I have never found any difference in the cutting-producing properties between plants acquired from cuttings or by division; indeed, I have at the present moment two beds of Annie King and Lilias that were made up last autumn in about equal parts of cuttings and old split-up stuff, and there is no perceptible difference in the growth. I have always found that the cutting plants flower earlier in spring. In the excellent article on the propagation of tufted Pansies, the writer, I think, somewhat misses the point in my notes. I am quite ready to concede the fact that any amount of cuttings can be obtained from plants that were put out in specially prepared beds, and that through a dry time were carefully attended to every day in the matter of water, but I was writing of Violas in the flower garden that were planted last autumn in ordinary garden soil, and from that time have had to shift entirely for themselves, receiving no extra attention. Under such circumstances there was very little growth on most sorts, especially of the Kintore type at the time we generally take cuttings (towards the end of July), but the grand rains have set up the plants wonderfully and growth is now abundant.

Propagating.—One outcome of the increased use of herbaceous and annual subjects is the yearly lessening of labour in the matter of the autumn propagation of tender plants, and they are now in many places so thinly represented, that a very small stock from which a few more can be taken in early spring is all that is required, the propagator naturally paying special attention to any particular colour which has been favourably received and which is likely to be wanted in increased numbers another year. There are also one or two things demanding special attention which may be noted. The silvery Centaurea is not as a rule raised from seed, but it sometimes happens the batch or part of the batch of seedlings has something special about it; they plants may be of a clearer white, the foliage may be finer or more deeply serrated, and so it is deemed advisable to perpetuate the stock. Cuttings of this Centaurea should be slipped off with a heel, no more trimming being done than is absolutely necessary, and then inserted singly in a compost of three parts leaf soil and one of sand in 3-inch pots. They only require just enough water through the winter months to prevent the foliage from withering. If there is any evidence of the presence of the leaf-boring maggot on Marguerites only the very tips of the shoots should be taken; it is better to put in a cutting only half an inch in length than to include leaves that are furnished with the small excrescences that indicate the presence of the maggot, or, at any rate, the maggot in embryo. Scented flowers, or rather flowers with scented foliage, do not strike very readily if the growth is hard, and if only a small stock is required, it is as well to lift a few old plants which, if put into heat in spring, will yield an abundance of cuttings; this will apply to Aloysias and to all the scented Pelargoniums. Writing of lifting reminds one that there are certain inmates of the flower garden—as Paris Daisies in variety and the Margarita section of Carnations—that if taken from the open ground and potted will give a nice display right through the autumn months and

nearly up to Christmas. If such lifting is contemplated the plants should be partially cut round with the spade towards the end of the present month and the operation completed in the course of a fortnight. They will be in good trim for removal about the third week in September, and if the lifting and potting are carefully performed and the plants are shaded from the sun for a week or two, there will not be the slightest check to flower or foliage. E. Burrell.

Claremont.

CARNATIONS FROM SEED.

The Carnation is a peculiarly difficult plant to manage in many places, the proof being that so many people absolutely fail with it. The reason is on many soils the necessity of annual propagation and planting in a timely way, and as many growers do not exactly know the need of this, or from pressure of work do not do it, failure is pretty constant. In certain soils, especially in those by the seashore, the plant is less difficult to manage, and often it does admirably with a little attention, but we are speaking generally.

Another reason is perhaps that the Carnation is naturally a biennial plant, *i.e.*, sowing itself one year and blooming and dying the next, so that it cannot be said to be a true perennial. No doubt these difficulties can be got over by people who really give themselves to the task, but even with these there are occasionally years like the past, in which, owing to the heavy cold rains of autumn, the plants do not root well and the layers come almost to nothing.

We wish to point out that a very good way to make up for difficulties of this kind is to grow the Carnation more commonly from seed sown every spring in a cool frame in March or April, the seedlings being pricked out in summer. Such seedling plants will be much more vigorous generally than the layered ones; they pass the winter better, flower more freely and give more lasting bloom. The drawback is that we get what chance gives us instead of the exact reproductions of the plants from layers, but if we take care to get seedlings of a good strain, we may find in them plants as handsome as any named kinds, though there may be a percentage of single and rather poor flowers. Seedlings may be put out, too, in beds not so carefully prepared as for the named layered plants, but in rough borders, bits of spare ground in the kitchen garden or nursery, half-covered ground in shrubberies, and in such places they will do well.

It is probable that in the future our seedsmen may do a little more to help the growers in this way by fixing the different colours; for instance, we ought to be able to buy seeds of reds and yellows, and so on. But as things are, mixed seed of good quality often gives us handsome plants, and there is the additional interest of perhaps finding among our seedlings varieties of beautiful character or novel colour, which indeed frequently happens; and there is the further interest to growers of saving seed from choice plants of beautiful or striking colour, or bold habit, or likely to be parents of good kinds. We find the best results from saving our own seed. Choose the first flowers of the finest varieties, and a much greater number of fine-flowered seedlings will be obtained. A large lot raised from seed produced by chance, although the varieties that gave it were all first-class, surprised us with their poor quality and large percentage of single or otherwise worthless flowers. The following year seed was only saved from selected hand-fertilised flowers, and these same varieties gave the finest batch of seedlings we ever had, nearly every one as good as the named parents. The reason is that the best and most double varieties will not produce seed if left to chance or insect intervention, the flowers' abilities in this respect being apparently in proportion to their quality, inferior flowers giving seed in abundance, of which the progeny will most likely be worse than the parent. We are convinced, however, that by saving one's own seed and raising a batch of plants each year, we can have Carnations in our gardens equal in quality of bloom to the named sorts and in greater quantity, as no Carnation plant flowers so strongly as the seedling; and if we always treat it according to its biennial character we are less at the mercy of the season. Seedling plants that have a summer for growth become so established that no winter can harm them, and they acquire a vigour that expends itself in a fine display of flowers, whatever the summer may be.—*Field.*

—— I was in a Reigate garden the other day and saw in bloom part produce of the plants raised from a packet of seed sent out by the Carnation and Picotee Society to its members. I do not know whether the produce of such seed is of better or worse quality than is obtained from the trade or other home sources, but all in this case was evidently of home saving. The total was originally about 100 plants. Of that number some twenty or so had proved to be single, and a few others of a semi-double nature, none being retained. Then when all were in full bloom some more either showed a loose, tree habit quite unsuitable for border culture, and some others had huge pod-splitting flowers that were ungainly and worthless. All these were pulled out also. There was left a very admirable lot of seedlings, and probably of at least twenty or more varieties or of diverse shades of colour or markings—white, flesh, yellow, pink, rose, scarlet, crimson, and numerous fancies, Picotees, &c., not one but was as well worth a name as are myriads of those we find in catalogues as border Carnations. All the best have been layered, and there will be hundreds of good plants to bloom next year. There is a fine result in Carnations from a mere packet of seed. Why should not seed be sown every year in gardens as well as increasing the best by layering? Really it does now seem absurd to be naming and certificating varieties when we can get such beautiful things from seed strains. Those who raise a few scores every year from seed have, apart from enjoying the beauty of the flowers, always the pleasant excitement of wondering what sorts of blooms are about to unfold.—A. D.

Begonia Worthiana.—My short note in praise of the above (p. 38) has done good service, as it has called attention to other and, as Mr. Bedford informs us, superior varieties. I am ignorant as to the value of the varieties he mentions. I have tried several other kinds of Begonias, but none have succeeded like the one named. I will certainly give those that Mr. Bedford advises a trial if I can get them.—G. Wythes.

Venidium calendulaceum.—This fine and showy annual was a few years since announced as a novelty at 2s. 6d. a packet. I recently saw a large plant of it on the rockwork in Mr. Robert Sydenham's garden at Birmingham, where it was highly effective, blooming freely, the colour bright clear yellow, with a dark disc, the flowers lasting a good time. It is in the bright sunshine that this charming annual is seen to the best advantage; it blooms with wonderful freedom and it is excellent for cutting from, though its blossoms will partly close in a dull light, and in cloudy, dull weather while on the plant. I find it does best in a warm sunny spot. It is also continuous in bloom, provided the seed-pods are not permitted to form. It is by no means so widely known and grown as its merits deserve.—R. D.

Hardiness of sweet-scented Verbena.—"E. J." will be more surprised than ever to hear that the scented Verbena has proved itself hardy not only in Middlesex, but in Notts also. A large plant which grew against a wall at Barnby Manor, Newark, for a good many years without being injured by frost—although crippled by the 40° registered in those gardens last February—was not destroyed. True, a piece of garden matting is tacked over it every autumn, but nothing in the shape of coal ashes is placed over the roots. From the appearance of the wood last spring the gardener feared the plant had succumbed, but with the return of warmer days growth started freely from the base, as in the case of "E. J.'s" plant. Doubtless many of our most beautiful and sweetest scented plants now supposed to be very tender would stand keen frost with impunity, especially in sheltered situations and with a slight temporary protection. When such subjects are growing against walls which have not good copings, it is a good plan to fix a piece or two of slate in a slanting position at the base of the plant to prevent drip from ruining the collar.—C. H. N.

Gypsophila paniculata and its uses.—This hardy perennial is now pretty well known. It is, indeed, a boon to the florist and to those who wish to secure lightness and elegance in the decoration of the dinner table or epergne. At a local show lately it was used with good effect in both the first and second prize table decorations, being associated in one instance with yellow and white Iceland Poppies and Maiden-hair Fern, and in another with white and yellow Marguerites. Grown amongst flowering and fine-foliaged plants in pleasure-ground borders it is very effective, and it is so hardy as to survive the sharpest winter. With me it does not flower until July even on a sunny border, and as it would be most useful in June, I intend planting roots this autumn in a spare pit facing south in order to induce it to bloom at that date.—J. C.

DISEASE IN LILIUM CANDIDUM.

"S. W. F.," who summarises at p. 54 on the causes of the disease in the above-named Lilium, also adds to the possible or probable list of causes "that the disease is mostly, if not entirely, confined to imported bulbs." I can, however, show that this theory is wrong. It is now about ten years since this disease first appeared. About this same time calling on a gardener at Sunbury-on-Thames I noticed some fine clumps of this Lily in a sad plight. The gardener knowing, asked my opinion as to the cause of the failure. I told him then what I still believe to be as likely as any reason which has been put forth, that I believed that the disease had been imported originally with the bulbs from France. Having thus got a footing in our gardens, it was ever present, merely waiting for certain atmospheric conditions most suited for its development. The clumps above alluded to were old ones, had occupied their then position for several years, and had flowered splendidly each year, excepting that referred to. Now in this case nothing whatever had been done to the bulbs; they were just where they had been for years past and had done so well, and their flowering annually was regarded as a certainty. The disappointment, therefore, at so complete a failure was great. Ample evidence was also before us at the time that the previous year's growth was good, and that such growth was well matured, as the flowering stems were then about 4 feet high. Here, then, is an instance of old-established clumps hitherto a complete success being quite wrecked by the disease. Nor is this an isolated case, for I have since seen many instances in cottage gardens where this Lily had been among the occupants for many years, and where "imported" bulbs were never dreamt of. But the fact of their being old-established does not carry with it immunity from disease, for who shall gainsay that the ever-present germs of this or any other disease shall not be carried miles and miles away, hither and thither in all directions? And it is just possible that dwellers in low-lying and moisture-laden districts will feel its attacks earlier and perhaps more keenly than those in higher and drier localities. In a season like the present one the disease is much less severe, and in this part of Middlesex instances of it are only few in number. But the fact that there is disease, as pointed out by "S. W. F.," in so tropical a summer entirely disproves the contention that cold, rain, hail, and the like are the origin of the disease, for in this district at least we have been quite free from such weather till the Madonna Lily was nearly out of flower. The experience of "S. W. F." respecting this Lily in cottagers' gardens differs from my

own, as I have stated above. Yet in the main "S. W. F.'s" experience of imported bulbs goes a long way in supporting my own views.

I would, however, like to tempt "S. W. F." into trying my baking process with these imported diseased bulbs. It has proved efficacious enough in some instances, and in those that fail, either wholly or in part, I incline to the opinion that the baking or drying is insufficient or incomplete. There is yet time, and time to do it well, and that the experiment may be trustworthy, I would suggest leaving a few in the soil just as they are. But lift the bulk, divest them of stem and leaf, which should always be burnt, and place the sound bulbs on a shelf near the glass in the greenhouse, where they may, near an open ventilator, obtain every possible drying influence. Let there be no shading on the glass whatever, and by turning the bulbs every few days, expose all sides alike. Give them this course of treatment for about two months, after which they may be planted, but not too deeply covered. Do not expect any radical growth this autumn, and be not surprised if some remain dormant during next year; indeed, this is most likely with the more weakened bulbs. I have now some bulbs, a portion of a badly diseased stock of 1894, which I purposely obtained for experiment, which after the drying never put forth any growth till now, though they emitted plenty of roots. These bulbs are now pushing forth their autumn leaves, and if undisturbed will possibly flower another year.

I have not as yet tried syringing the plants with the Bordeaux mixture, but I see no reason why it may not be tried early in the season, more as a preventive measure. Indeed, I am of opinion than any remedy must be rather a preventive one by reason of the very rapid spread of the disease when once it puts in an appearance. It is a singular fact, too, that this particular disease confines itself to those Lilies whose leaves are somewhat soft in texture. H. H. M.

NOTES FROM MYDDLETON HOUSE.

Hardy plants of all kinds form a delightful feature in the beautiful garden of Mr. Bowles, at Myddleton House, Herts, and though my visit to this garden did not take place until the beginning of August, I was amply rewarded in finding many interesting plants still in bloom in spite of the unfavourable season. In front of the house is a gently undulating lawn, on which among many other handsome trees is a very fine specimen of the deciduous Cypress (Taxodium distichum), not less than 60 feet in height. An extensive pond is fringed with Irises and other suitable plants, while on the water float handsome Nymphæas of various kinds.

Many bold and effective plants adorn the various borders, and among those still in bloom I noticed Pentstemon Killosoni, with large purple flowers, and also bold masses of the handsome Cotton Thistle (Onopordon acanthium). Campanula bononiensis alba is represented by a specimen quite 3½ feet or 4 feet high; the white flowers are small individually, being not much more than 1 inch in length, but as they are disposed in a very long raceme and in large numbers, the plant is very striking. Most effective, too, are the variegated Comfrey and the bold Oreocome Candollei, with its large decompound Fennel-like leaves and umbels of white flowers 5 feet high. In another border Achillea decolorans bears its corymbs of pale yellow flowers 3 feet from the ground, and Cichorium Intybus is conspicuous by its deep blue blossoms. Antholyza paniculata, Abutilon vexillarium, and Lythrum virgatum alatum are also in bloom.

Not the least interesting feature is the rock garden, which, though on a small scale, contains, nevertheless, a fine collection of suitable plants. Among those still blooming I particularly noticed the following: Linaria repens alba, with white flowers, appearing from a distance more like Lily of the Valley than the flowers of a Toadflax, Linaria reticulata, L. antherinifolia (purple, with yellow throat), Francoa sonchifolia (white), Teucrium purpureum, Tunica Saxifraga, Aira cæspitosa, A. vivipara, Cerastium grandiflorum, and the pale blue Borago laxiflora. The pretty red and yellow flowers of the Canadian Corydalis glauca are to be seen in great profusion, and are borne well above the bipinnate glaucous foliage of this interesting plant, which unfortunately is an annual, but seeds itself freely.

Very sweet is the perfume emitted from the foliage of Micromeria Douglasi, which is grown more for the sake of its delicate scent than its inconspicuous flowers.

The white Marsh Marigold (Caltha leptosepala) and the sweet-scented white Orchid, Spiranthes æstivalis, are growing from a bog bed, carpeted with Pratia angulata and other suitable plants.

The garden of course contains many treasures which are now out of bloom, and therefore omitted from this short notice.

Elmside, Exeter. F. W. Meyer.

Tufted Pansies.—I recently noted a few of the most useful sorts for masses from a collection of close upon a hundred. The following may be expected to succeed in almost any soil with ordinary attention: Ardwell Gem, yellow; Wm. Neil, pale rose; Blue Gown, a most refined self colour; Sweet Lavender, soft lilac; Sylvia, pale primrose; Countess of Hopetoun, white; and Blue Cloud, white, distinctly edged blue.—H.

Tufted Pansy Border Witch.—This sort is among the most beautiful of all. The colour is pale lavender-blue, delicately shaded with a lighter tint. Mr. Baxter, Woking, has it in capital form, where its striking colour is very telling, and one may pick it out even when surrounded by dozens of other varieties. The sort is recommended for the flower garden, having an excellent habit of growth.—H.

Gaillardias are now in great beauty, having apparently been greatly benefited by the recent bountiful rains. Within the past three weeks a considerable amount of fresh growth has been made, and a great show of flower-buds is the result. With good open weather these will furnish a profusion of their blossoms for weeks to come. It is a good time to sow seeds of these for planting in October next. Such as these will form good plants for next year's flowering, and be far in advance of those raised in spring in slight warmth.

Crown Imperials (Fritillaria imperialis).—These early-flowering bulbous plants may where large clumps exist be lifted and replanted at any time during the present month. It is not advisable to leave them beyond this time, as their naturally early flowering is responsible also for a more early rooting than is usual with some bulbs. They may, however, be procured from dealers in hardy bulbs in a dry state after this time. Early in the year these plants are very useful in the open border on account of their distinct and effective character. Especially worthy of every attention are the gold and silver-leaved forms of these plants. Apart from their foliage effects, the plant is handsome and worthy of good culture. Especially is this true of the yellow-flowered kinds. Apart from the yellow and sulphur-flowered kinds, there are others of bronzy crimson and of varying shades of red, the variety rubra maxima having immense red blossoms of a size fully equal to the largest Tulip. Any fairly good moderately rich soil suits them well, planting the bulbs 6 inches deep.—H. H.

Asclepias tuberosa.—This is not only one of the most distinct of hardy herbaceous plants, but it is also one of the showiest, and most worthy of extended cultivation; yet, notwithstanding its distinctive colour, it is seen but rarely in our gardens. While rarely seen in anything like good condition on soils that are cold and wet in winter, it may be grown quite easily on light warm soils. Where such do not exist it would be very easy to prepare a barrowful or so of suitable soil, say of peat, leaf soil and sharp sand in equal parts. This, added to the ordinary garden soil, or even discarding the latter altogether and preparing a bed of the soil named, with a few inches of drainage, would be sufficient to secure success. The brilliant and compact umbels of orange-coloured blossoms are produced terminally on stems nearly 2 feet high, and at any time of the year the peculiar shade of colour is by no means plentiful. In those gardens where special accommodation is given to American shrubs of a peat-loving nature this plant might also be included. Once planted in suitable soil it should remain undisturbed for several years. The plant may be readily raised from seed, which is easily obtained. In this way flowering plants may be secured in about two seasons from the sowing of the seed.—E. J.

Galtonia candicans.—Among hardy bulbous plants the above is just now one of the most conspicuous in flower. It is an excellent plant in many ways, and admirably adapted for the flower garden, the herbaceous border, or in bold, telling groups in the conservatory. In each and all of these it is capable of producing quite a unique effect. Perfectly hardy and of robust constitution, large bulbs will frequently produce from three to five of the giant spikes, each carrying perhaps a score or more of pure white, drooping, funnel-shaped flowers. Now that it may be obtained cheaply it should be freely planted in the wild garden and woodland. Seeds are produced abundantly, the seedlings making rapid headway and flowering in the second or third year when they are grown quickly from the earliest stages. Open spots in the foreground of shrubberies may with good results be filled with this, planting it always freely in groups.

NOTES FROM OAKWOOD.

Although the heat and drought of early summer much affected the growth of the auratum Lilies in the high grounds of Oakwood, those in moister, less exposed positions show no diminution in vigour. The flower-stems are very stout, some running up to a height of 9 feet, carrying twenty expanded flowers of fine quality, with many buds to open. Fasciated stems carry a much greater number, but not nearly so large. One good feature of this Lily is the succession of bloom that can be had by planting a sufficient quantity of bulbs, the flowering season extending over a period of six weeks or more. L. canadense is a pretty species with slender stems and bright blooms, quite a gem. It is flowering well at Oakwood. L. superbum is quite at home, throwing up tall, stout flower-stems in moist places among evergreens, which show up the richly tinted blooms to great advantage. It is also doing well, though not attaining such dimensions on the hillside. Gentiana septemfida grows luxuriantly, forming broad masses of healthy foliage with abundant heads of bloom. It resembles its early-blooming relative, G. acaulis, although the colour of the flowers is not so rich and they are produced in crowded heads. Montbretia Pottsi, forming a dense mass of foliage several yards through and crowded with flower-stems, was very pretty, while a thicket of the bright flowered Polygonum sphærostachyum was very attractive. Indigofera dosua is a cheerful-looking species, the flower being of a bright attractive shade of pink. Of the Sea Hollies, giganteum is perhaps the most striking on account of the silvery grey colour of the foliage. Sedum pulchellum is one of the most distinct of a large family, being of robust habit and flowering abundantly. Rhexia virginica, when seen in a really thriving condition, is one of the most distinct and loveliest of hardy flowers. The flowers, though small, are by reason of their bright colour quite showy, so that a clump when in full bloom is very effective. It has evidently become quite at home at Oakwood, and is decidedly one of the prettiest things there just now. It evidently enjoys moisture at the roots, but I should say it is not likely to last long in close, retentive soil. J. C. B.

AGAVE CONSIDERANTI.

This, also known as Agave Victoriæ Reginæ, under which name it was awarded a first class certificate by the Royal Horticultural Society on October 6, 1875, is certainly the gem of the family. At first sight its habit suggests the filifera group, but the filaments here are rarely produced, while the plant is more noble and massive in character. The leaves are terminated by a strong, black, wavy spine having a few small secondary spines on two of the three edges which the leaf has at its point. The margins of the leaves are entire and edged with white, conspicuous white markings or lines showing the imprint of the previous leaves. It was introduced from the cooler parts of Texas in 1872 by M. V. Considerant. A plant was purchased by the late Mr. Peacock, of Sudbury House, Hammersmith, who at that time had a fine collection of succulents, and was exhibited by him under the name of A. Victoriæ Reginæ, which name undoubtedly ought to be put on one side, and the proper name, A. Consideranti, used. The Marquis de Fronteira, who kindly sent us the photo from which the illustration was prepared, says that the flower-stalk grew at the rate of 8 inches in the 24 hours.



Agave Consideranti (Victoriæ Reginæ) in the Marquis de Fronteira's garden at S. Domingos de Benifica, near Lisbon. From a photograph by J. Guerra.

Cactus Dahlia Matchless.—The name for this is well chosen. It is almost black in its dense crimson shade and of true Cactus form. The only fault is that the flower is too large; this, however, may be remedied by not being too kind in the preparation of the soil and by allowing every bud on the plant to develop.—H.

Cactus Dahlia Robert Cannell.—Magenta shades in flowers are not popular, but in the case of the colour of this variety it is relieved by a light shade near the edges of each floret. This produces a rich colouring. It is of medium size, true form, not too tall in growth, and withal handsome.—H.

Cactus Dahlia Delicata.—This is a charming variety of true form, which is light and graceful. The shade is soft pink, fading to blush at the points of the florets. If one may find a fault it is that, like too many of the Cactus Dahlias, it does not throw its blooms well above the foliage.—H.

Clematis Henryi.—The large blooms of this white variety are especially showy and it is far the best of its colour. Its flowers are about 8 inches in diameter and freely produced. This Clematis belongs to the lanuginosa type, and therefore produces its blossoms on the young newly-made growth. As a climber trained against a wall it is very handsome.—H.

Clematis Princess of Wales.—This is a fine variety. The colour is bright lavender and its blooms are each about 6 inches across. I saw a specimen in flower a short time back which had been planted against a house four years, and it had upwards of a hundred blooms fully out at one time. The showy character of such a plant may easily be realised.—H.

ORCHIDS.

SEASONABLE NOTES ON ORCHIDS.

The stormy weather of late has necessitated frequent application of fire heat in the warm houses. The temperature would not fall low enough at night to do any harm, but by keeping the pipes moderately warm, a good chink of air can be left on at top and bottom, and this is just now of especial advantage, as many plants are finishing up their growth and must be kept dormant afterwards. A free circulation of air is the best possible means of preventing the plants starting away, and though fire heat keeps the temperature up, so that other plants that may be growing are not checked, less watering and damping have also been needed, and advantage may be taken of the lull of work to give the plants in all departments a thorough cleaning. This cannot be done too often, for if only a few insects are found, the plants are better for having the dust and dirt that will accumulate upon them sponged away, this greatly adding to their appearance and benefiting their growth. Red spider frequently attacks the foliage of Dendrobiums at this season, and in cleaning a careful watch must be kept for this. The small white scale, too, is frequently in evidence upon the leaves and bulbs of Cymbidiums, such as Lowianum or giganteum, Cattleyas, and many others, and cleaning would have to be done very often and carefully, too, if these are to be thoroughly destroyed. With the latter, the scaly bases of the pseudo-bulbs and the rhizomes should come in for careful attention, pulling the sheaths right off if the insects cannot otherwise be removed. Many Cattleyas at this season, while not requiring repotting, will be better for a little surfacing with good sound peat and Moss. C. Leopoldi and others of the guttata section are emitting roots freely, and these pushing through the new compost strengthen the plants materially. Plants of Cypripedium insigne grown in rather a warm house are pushing up the flower spikes freely. Where other plants are growing in a different temperature, these latter will keep up the display when the former are past, but if all have been growing in the same house, a few of the plants should be placed in cooler quarters

for the same reason. Deciduous Calanthes have now filled their pots with roots and will be benefited by a little weak soot water at the roots. The growth, too, must be inured to more sunlight and air, as soft, flabby foliage soon falls, and the longer this is kept on the better the spikes will be. This exposure must, however, be brought about gradually, as no Orchids are more easily injured by sudden changes. They must still be kept in the warmest house, and no diminution of the water supply will yet be needed. Lælia superbiens is just now producing its spikes from the apex of the new growth, though it will be months before the flowers open. It is, however, a capital time to set about improving struggling plants by notching half way through the rhizome just beyond where the growth is required. I have always found the growths come more seasonable when this is done now than if left until spring, possibly because of the eyes having plenty of time to plump up during the winter months, and therefore being ready with the increased heat and light in spring to break at once into growth. The most promising looking eyes should be chosen, those that look round and full, as these are the most likely to break strongly and well.

Several of the forms of Lælia elegans are now very beautiful, and contribute largely to the attraction of the flowering house. Interspersed with these autumn-flowering Cattleyas and Lælias the feathery spikes of the old and pretty Oncidium flexuosum have a light and pretty effect, while the sweetly-scented Maxillaria Harrisoniæ has still a few flowers left. Odontoglossum vexillarium is again on the move, and will soon require attention at the root. The best of the material should be used for this lovely Orchid, and before repotting or surfacing see that the plants are entirely free from insects. The cool species are enjoying the present stormy weather, those in frames especially benefiting by the warm showers, while the cool house can be left almost wide open day and night. O. Edwardi is throwing up strong spikes, and the plants need abundance of water at the root. A full supply is also required by Anguloas, Lycastes, Oncidium tigrinum and others in full growth, but any that are finished must be carefully watered until the spikes are showing. As soon as these are seen it is safest to either elevate the plants upon inverted pots in saucers or to use the pans now made to answer the same purpose, viz., to keep the slugs and other insects away, care being taken to thoroughly isolate the plants. If one leaf is touching another plant the insects will probably find the spikes out by instinct, and the mischief they do is surprising. Carefully note the smaller habited kinds of Oncidium, as O. longipes, O. cucullatum or Odontoglossum Cervantesi, and see that the little bulbs are firmly fixed and also have room to swell. A little attention now makes a wonderful difference to them, placing a bit of Moss or peat here or a small stake there as seems to be necessary. While encouraging the Sphagnum Moss to grow freely about them, it is very unwise to let it creep too high up the pseudo-bulbs of these small-growing species, and a little of it should be pulled out or cut off as soon as it is seen to be encroaching. As the days shorten the shading will be diminished and every effort made to ripen up the growth in all the houses. The temperature of the warmest house may stand at about 65° by night, rising almost to 100° on bright afternoons at closing time, but 75° is ample by fire-heat. The Cattleya house will be best kept rather steadier, 55° being ample at night for the majority of the species, while any requiring more heat may be placed in the East India house for a time. The cool house, as mentioned above, is left open at night, but during hot days it will still need to be shaded heavily, damping all the stages, floors and dry places several times through the day.

R.

BLETIAS.

If we except one species, B. hyacinthina, this old genus of terrestrial Orchids is hardly ever seen, yet several of the species are very useful and decorative plants. They are of the easiest culture, and thrive either in a cool Orchid house, an ordinary plant house, or pit. They are widely distributed over China and Japan, some species also coming from America. The best way to grow them is in pots or pans in a compost consisting of good fibrous loam and chopped Sphagnum Moss, to which a good proportion of leaf-mould and plenty of finely broken crocks should be added. They may be potted as soon as, or rather before, they commence to grow, draining the pots well and keeping the top of the pseudo-bulbs a little below the rim of the pot, and not raised, as in potting epiphytal Orchids. If potted before growth commences the plants may be plunged in ashes over the rims of the pot, which will keep them in the right state for moisture without watering, provided the soil at potting time was not too dry. When the growth appears, a little water must be given, this being increased as the roots begin to run, allowing a free supply when in rapid growth. Abundance of air must be given while growing, and the shoots frequently syringed in order to keep the foliage free of insects. Plants newly potted will require nothing in the way of manurial stimulants the first year, but after they are well established in the pots a little well-diluted liquid made from cow manure and soot may be used at intervals of about a fortnight. This will increase the vigour of the plants and the flowers will be more highly coloured. They will bloom at different times, according to the time they are started and the rapidity with which they are grown, and as soon as the flowers are past the plants may be stood out of doors in a sheltered, sunny position. At first they may have the full advantage of the heaviest rains, but as the foliage begins to ripen they must be protected from these, but exposed to light showers. By the end of August they will need to be taken inside again, and very little water given during the time they are resting, again increasing the supply as the new growths start. Formerly several other Orchids were called Bletia, as, for instance, Brassavola acaulis and Digbyana, Lælia Perrini, and several others.

B. hyacinthina is a free-growing and handsome species nearly or quite hardy in a sheltered position. The flowers, produced on scapes a foot and upwards in length, are bright rosy purple in ground colour. The lip is white with crimson-purple lines and spots. This is extremely pretty arranged with Odontoglossums, the tall scapes having a light, yet telling effect. This was introduced from China as far back as 1802, while a light-coloured form of the type with a violet lip was introduced from Japan in 1843 under the name of B. Gebina.

B. patula, being a native of the West Indies, requires more heat than the other kinds and a drier atmosphere. This may be well grown in a house such as suits the Mexican section of Lælia, and thrives in the same quality of compost as the other kinds named. Like them it requires a good rest, and during this period may be kept cooler. The flowers are lilac-rose on the sepals, petals and front of the lip, the ridges on the latter being wider. Introduced in 1830.

B. Shepherdi is the largest and strongest-growing in the genus, producing long, branching scapes of deep purple flowers at various times of the year, usually in late winter or early spring. The pseudo-bulbs of this kind are apt to decay if too deeply buried, and some growers prefer to keep these just above ground. The growth is, however, better if they are kept below, and if not kept too cool and moist they are safe enough with ordinary care. This was introduced from Jamaica in 1825.

B. Sherrattiana is another very pretty kind which bears long, erect spikes of pretty soft rose-coloured flowers. The lip is deeper in colour than the rest of the flower, being deep purple, with golden yellow lines running through the middle lobe. A native of New Grenada, whence it was introduced in 1867.

B. verecunda is interesting as being the oldest Orchid now in cultivation, having been grown in England ever 150 years ago. It is hardly worth growing as an ornamental plant, the flowers being small and dull in colour. It is also a native of the West Indies, and therefore requires a warm house, where it flowers during the summer and autumn months.

R.

Saccolabium cœleste.—This beautiful little species is now in bloom, the pretty white flowers tipped with sky-blue being quite distinct from those of any other Orchid. This is a native of Siam and first flowered with Sir Trevor Lawrence. It should be grown in the warmest house, not far from the roof glass, in wooden baskets filled with Sphagnum. It must have a bright clear light all the year round and only needs to be shaded from the brightest sunshine. During winter the plants must never be dust-dry, though requiring much less water than when in full growth, and the temperature must not be allowed to fall below 60° at any time.

Oncidium luridum.—This belongs to the section of the genus without any pseudo-bulbs, and is an interesting and pretty species. The leaves are light green, covered with very small spots, and the flowers are produced upon erect racemes about 2 feet in length. These are greenish yellow in ground colour, sometimes blotched with chocolate-brown, while other varieties are spotted with bright red. It is best grown in pots, with two-thirds of Sphagnum Moss to one of peat, and should never be dried at the root. Being a native of Jamaica, it thrives well in the Cattleya house.

Epidendrum fragrans.—As the specific name implies, the blossoms of this Orchid are very fragrant, a single spike of flower perfuming a house. It is very much like E. cochleatum in growth and also in the shape of the flowers, but the latter is rather the stronger grower of the two. The pseudo-bulbs of E. fragrans are not usually swollen so much in the middle as those of E. cochleatum. The blossoms occur in small racemes from the top of the newly-formed pseudo-bulbs, and are creamy white in ground colour with a few purple streaks about the lip, which is uppermost, giving the flowers the appearance of being upside down. It thrives well in the Cattleya house, requiring a moderate supply of water the whole year round, less of course being necessary during the winter than when the plants are growing. It is a native of the West Indies, very free flowering, and the blossoms last well in good condition.

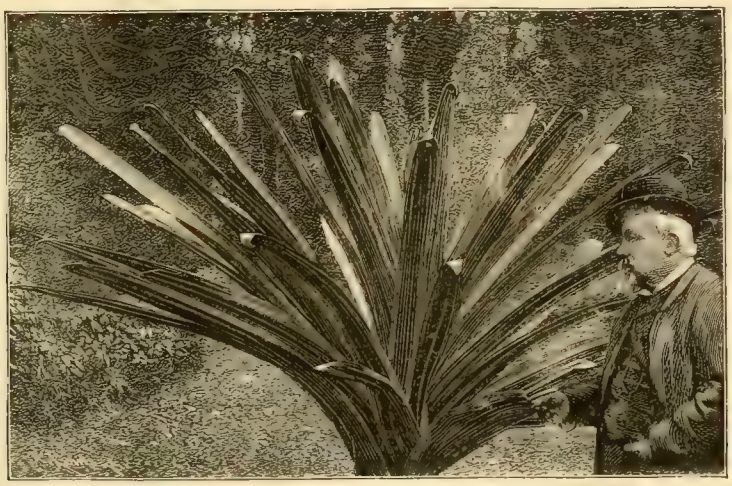
Grammatophyllum Ellisi.—This beautiful plant is a native of Madagascar, and is named after its introducer, the Rev. W. Ellis. It is the most popular in the genus, and a most desirable Orchid on account of its freedom of flowering and its bright, attractive appearance. The pseudo-bulbs are from 10 inches to a foot in length and bear several leaves. The racemes are simple, about 2 feet in length, arching, and bear a large number of flowers. These are tawny yellow in ground colour, with reddish and purple lines and markings, the lip being white, with a few streaks of rosy purple. The culture

of this plant should not be attempted unless a full stove temperature can be maintained. The best position is one not far from the roof glass in a house devoted to Dendrobiums and similar Orchids, where they have abundance of water at the roots and atmospherically during the growing season. When the pseudo-bulbs have finished they need a decided and long rest, and very little water at the roots will then suffice. The habit of growth being so strong and vigorous, the compost must be fairly substantial, and the pots used may be fairly large, but the drainage must be perfect. Plenty of large pieces of crocks and charcoal should be mixed with the peat and Sphagnum. The flower-spikes are produced from the base of the forming pseudo-bulbs at this season, and last well in good condition.

Stove and Greenhouse.

TILLANDSIA (VRIESIA) GLAZIOVANA.

Bromeliads were some fifteen or twenty years ago very fashionable in France. Here and there in large houses or winter gardens some huge specimens are still to be met with. The



Tillandsia Glaziovana. Engraved for The Garden *from a photograph sent by Mons. J. Sallier fils, Paris.*

accompanying illustration represents a magnificent specimen of T. Glaziovana I have grown for years at the Château du Val, near St. Germain-en-Laye. At the place are still some different forms of the plant with narrower or larger leaves, and these variations might account for the different names under which it is known, viz., T. reginæ, T. gigantea, T. Glaziovana. The plant under notice attains fully 9 feet in width; the long leaves, leathery and firm, are of a fine glaucous green. These big Bromeliads usually flower before attaining such a large size; they then develop a stout erect spike, carrying numerous whitish flowers with a perfume like Jasmine. From seed I now have nice young plants. In large greenhouses or on a winter garden rockery it is very effective. The species was introduced from South Brazil. J. Sallier.

Neuilly, Paris.

Alonsoa acutifolia.—This is, in all probability, a form of A. incisifolia. It can be seen in one of the greenhouses in the Botanic Gardens at Edgbaston bearing racemes of bright scarlet flowers with a dark centre, and continuing in bloom all the summer. It is a singularly bright and effective plant and well deserves general culture. At one time the Alonsoas were very popular, but they have shared the fate of many other good things—crowded out by claimants of newer introduction. A. linifolia and A. Warscewiczi are sometimes grown as annuals; both are scarlet-flowered in common with all the species, excepting A. albiflora, which bears long terminal spikes of white flowers, having a yellow eye. This makes a good autumn and winter-flowering plant in a greenhouse or conservatory.—R. D.

Fuchsia triphylla.—At the Edgbaston Botanic Gardens Mr. W. B. Latham uses this fine and showy species somewhat largely as a greenhouse plant at this season of the year. It has a somewhat compact habit of growth; the flowers, which are cinnabar-red in colour, are produced in long terminal racemes, the petals shorter than the sepals. When the plants are in full bloom the branches become somewhat pendent and take on a graceful habit. Why this fine and most useful ornamental plant is not more grown for greenhouse and conservatory decoration is a matter for wonder, probably because it is not so well known as its merits deserve. Whether it is capable of being grown large enough to form an exhibition specimen I cannot say, but if it is possible, and were so shown, it would create a sensation; the distinct colour of its flowers would make it tell. It may be added that the fine old Peruvian F. corymbiflora is also in fine bloom at Edgbaston, a tall plant bearing numerous corymbs of flowers being a conspicuous feature in the show house.—R. D.

EARLY ROMAN HYACINTHS FOR FORCING.

The earliest importations of these are now to hand and no time should be lost in securing supplies. The tropical heat of the year has been in favour of most bulbous plants, and so far as I can gather our neighbours across the Channel have been equally well favoured in the matter of sunshine. Were all our summers as remarkable for heat in the first half of the year as has been the case in 1895, I am of opinion that good bulbs of these Roman Hyacinths can be grown in certain of our more favoured districts in England. We could not, however, even then mature them early enough, but they might come in useful for the successional and later batches. Could we even do this it might in a measure tend to the reduction in the price of the bulbs, which cannot be bought, forced into bloom, and put on the market with a profit to those forcing the bulbs. Indeed, I am well aware from my own experience, and also that of others who have for years largely forced these into bloom, that if no second spike comes from the bulb the work is done at a loss. But many will say, why grow them at all unless they are profitable? To this I reply that the majority of large growers for market have customers to cater for all the year round, and in these times it will not do to turn a deaf ear to the constant demand of your regular customers for such a well-known flower as the Roman Hyacinth. The potting, forcing, and later on sorting and bunching of the flowers of say 150,000 or 200,000 of these bulbs are no small items. Yet there are many who grow this number and a few others who grow, or rather force, even larger quantities. One of the chief things in connection with growing these for market is keeping up a daily supply when once they begin. Any break in the supply will quickly have its effect on the customer and must be avoided if possible. As soon as the bulbs arrive unpack them if they come direct from the growers, and turn them out of the bags on to the floor of a dry shed or similar place. Here they will quickly dry if left open for a short time.

Pots and soil should be in readiness, so as to get the whole of the bulbs potted with as little delay as possible. Some, I believe, favour the idea of potting in successional batches over a long season, while the market man generally gets the whole potted as early as possible. In this I think he acts wisely, seeing that the bulbs are ripened in a climate warmer and earlier than our own. By this early potting a maximum amount of roots is ensured before the bulbs are placed in heat—a decided advantage for all the earliest batches. The time of flowering is best regulated by their introduction into warmth. My advice then is to pot all as quickly as possible after they are to hand, and by obtaining an abundance of roots the foundation for good spikes under hard and early forcing will be well laid. The earliest spikes of these Hyacinths are usually seen in Covent Garden Market in October, sometimes quite early in the month; but thus early they are not so good as a month or so later.

So far as compost is concerned, any fairly good open soil is suitable, planting five or six bulbs in a 6-inch pot. Plant firmly, leaving the apex uncovered in the potting. Water thoroughly and allow the soil to dry a little before covering them up. With 4 inches or 6 inches of cocoanut fibre, or half the latter depth of ashes above them, they will want no further attention till required for forcing. In employing ashes for plunging such things, and in particular where the top of the bulb is just exposed, it should be known the ashes are free from sulphur. If used quite fresh from the furnaces the emerging spike and growth may be injured by contact; indeed, this has occurred in my experience, and for this reason the fibre is preferred. When first introduced into warmth a temperature of 70° will suffice, eventually plunging in a darkened frame or pit in a bottom-heat of about 85°.

E. J.

Gloxinias grown cool.—Fire-heat is by no means so necessary for Gloxinias as is generally supposed, though of course for early blooming it cannot be dispensed with. Where they have been grown in a warm structure many of the Gloxinias will be now past their best—a very different state of affairs to that brought under my notice a few days ago, when I saw a fine batch of these beautiful plants just coming into flower. They were not needed till the month of August, and having a stock of tubers in hand (the result of last year's seedlings), the following treatment was given them with perfectly satisfactory results. In the first place, they were, when dormant last autumn, laid in shallow boxes of sand and wintered

under the stage in an ordinary greenhouse, the sand being occasionally slightly moistened. Then, as soon as signs of growth made their appearance in the spring, the boxes were stood on the stage and soon afterwards the plants were potted off. When this was done they were placed in an ordinary garden frame on a firm bottom of ashes. Mats were thrown on during the night while any probability of frost remained, and no more air given than was absolutely necessary; while of course, by shutting up early every care was taken to economise sun heat as far as possible, the results being shown in a fine batch of plants bristling with flower buds, which in the early days of August were rapidly expanding. Grown in this way insect pests rarely give any trouble. An excess of moisture must of course be guarded against. The beautiful garden forms of Streptocarpus also do well under the same treatment. The fact that Gloxinias can be grown in this way has been before now referred to in The Garden, but in many places at least their value for late blooming is overlooked.—H. P.

Fruit and Vegetable Crops.

THE FRUIT CROPS.

Judging from what I have seen in various south-western districts, the fruit crops of 1895 may fairly be considered highly satisfactory. There have been heavier crops of some few kinds of fruit in other seasons, but it is not often that so few complete failures can be chronicled. All kinds of fruit trees flowered most abundantly. Both Pears and Plums were exceptionally plentiful last season, and the trees of these are giving the lightest crops this summer. It cannot be too often pointed out how much over-worked trees stand in need of assistance at the roots. Once they have commenced bearing heavily it may be taken for granted the roots have exhausted much of the fertility originally contained in the soil, and a renewal of this should take place before the stunted growth and wholesale dropping of small fruit take place. It is orchard trees and all that have no access to a good food supply in the shape of well-manured garden ground that stand most in need of assistance, and, curiously enough, many orchards in a poor plight are owned or rented by men who have the most opportunities of easily supplying the required manure. Old orchards in which fewer failures are noted are those in which sheep, pigs, poultry, and in a less degree cattle are nearly always present. Those that fare the worst of all are lawn trees. Very many really handsome fruit trees have either been planted on lawns or enclosed of late years, and these prove both ornamental and serviceable. At Mentmore, for instance, there is a fine tree of Blenheim Pippin Apple in the pleasure-grounds that occasionally yields 30 bushels of good fruit in a season, and there are equally large specimens of Apple trees to be seen on lawns in this and adjoining counties, but they only produce heavy crops every second or third year owing, more often than not, to poverty at the roots. So starved are some of these trees that the red spider seems capable of exhausting every particle of chlorophyll formed in the leaves, and both the present and future crops will suffer accordingly. It is the starved lawns and the trees that are established in these and poor ground generally that are invariably the greatest sufferers from drought, and had not heavy soaking rains fallen when they did, many heavily laden trees would have succumbed completely.

Plums.—To all appearance the crops are very variable. In some positions and some gardens the crops on many of the trees are very heavy, in others they are very light indeed, the reasons for which I have already given. In the home counties, and Bedfordshire in particular, Plums grown as orchard trees are undoubtedly profitable, ranking next in this respect to a plantation of Gooseberries. As it happens, these two kinds of fruit succeed remarkably well together, Plum trees being less liable to over-grow the bushes than are Apple, Pear, and Cherry trees. As far as my experience extends in the south-western counties, the Plum has not as yet been largely planted as an orchard tree. I am within comparatively easy distance of the famous Plum orchards in Worcestershire, and know full well what a difficulty the growers in that county have in getting rid of extra heavy crops at remunerative prices. It is also well known that Plums do not travel satisfactorily, and the fruit has therefore to be either got rid of locally, or must be either dried or made into jam, or spoilt. Prices fluctuate surprisingly, and are so low during a plentiful year that it scarcely pays to send the fruit to the larger towns. I have known fruiterers give as much as £1 for a tree of Victoria, this being when Plums were somewhat scarce, and only offer 5s. for an equally good crop, or, say, three half-sieves, in a plentiful season. All things considered, I should say there is room for a Plum and Gooseberry orchard in the neighbourhood of most of our south-western towns, but directly it is found there is "money in it," orchards will be planted in various directions, and none will then pay really well. I hold that the Plum is the least fastidious of fruits as regards situation and soil, but the best results attend planting in a position sheltered on the east side by a belt of forest trees, the latter affording temporary shade from bright sunshine on a frosty morning long enough to bring about a slow and safe thaw. Moderately strong gravelly, or sandy, rather than very clayey loams suit most varieties of Plums best, and some of the heaviest cropping trees I have ever seen are rooting in chalky soils. As a matter of fact, they may be grown successfully almost everywhere. If one variety fails, another may succeed, especially if the stocks are locally raised and grafted. By far the best trees of Green Gage, Victoria, Kirke's, and Orleans I have come across were raised by their owners, and there would be far fewer failures if this plan were more generally adopted. At Lymington, near Ilchester, there are fine trees of Green Gage and Victoria, each carrying not less than three bushels of good fruit, growing on a strong clayey soil, but then these were home raised. New Plums have not gained much headway hereabouts. Sultan, Monarch, Grand Duke, and Czar have all been planted by a few growers, but their size and showy appearance are their principal recommendation. Undoubtedly Monarch, Grand Duke, as well as Prince Engelbert, Pond's Seedling, and Diamond are fine late varieties and among the best that can be grown for the markets, but they are, as a rule, fit for cooking only. Nor have I a very high opinion of the quality of the Sultan, but have found the Czar a moderately early variety good enough for dessert. Not one of them is really equal to a well-ripened Victoria gathered from a tree not too heavily laden with fruit. Unfortunately, the best flavoured Plums, this including the Gage family, Jefferson, and Coe's Golden Drop, when grown as standards are liable to have their fruit much disfigured by winds and rain, bruising and cracking being far too prevalent at times. Neither de Montfort nor Kirke's, two highly flavoured purple varieties, succeed well in the open, and these, as well as Oullin's Golden, Early Transparent Gage, Denniston's Superb, Green Gage, Bryanston, Reine Claude de Bavay, Jefferson and Coe's Golden Drop are all richly flavoured and worthy of wall space. Wilmot's Early Orleans and Victoria are also fully deserving of room against a moderately warm wall, these often giving crops of really good fruit when most other varieties have failed.

Apple trees generally are very heavily laden with fruit, and, thanks to the rains, the size will not be so much at fault as at one time anticipated, though the quality as yet is second rate. With more sunshine we may reasonably expect an improvement in the quality, but if we get little of this during the next month both the flavour and keeping properties will be at fault. Wall trees are fast becoming popular, and I have seen trees of Lord Suffield, Peasgood's Nonsuch, Ribston Pippin, and Baumann's Winter Reinette carrying extraordinary crops of fine fruit. Quarrenden cropped heavily last season, and the trees are again very heavily laden with moderately large highly-coloured fruit. It is very satisfactory to note that Ribston Pippin and Blenheim Pippin promise to be finer, cleaner, and more abundant than is often the case. In some orchards the last named is the only variety that will fetch good prices this season. The cider orchards will be a beautiful sight by the end of this month, the crops being phenomenal.

Pears.—Second-rate early kinds are fairly plentiful, but the successional varieties, notably Williams' Bon Chrétien, are a light crop, and the same may be said of the greater part of the varieties grown. Even where the trees are fairly well cropped the fruit is under-sized, in consequence of either malformation of flowers or a deficiency of pollen. The only really good crops I have seen are produced by extra fine trees of Beurré Hardy, Glou Morceau, and Beurré Rance trained against house fronts, and the old stewing Pear, Uvedale's St. Germain, is plentiful in places. Only a comparatively few standard Cherry trees are grown in this county, and birds have the bulk of the fruit that is produced. If properly planted, Cherries would succeed well as orchard trees, and there is a good demand for the fruit. Wall trees have given excellent crops, and it is not often Black Tartarian and Morellos are seen so good as they have been and still are hereabouts.

Apricots have turned out better than expected. Many of the trees were cropped heavily during the past two seasons, and it would not have been very surprising if they failed somewhat this year. As it happens, there are some grand crops of Moorpark, St. Ambroise, Large Early, Royal, and Hemskirk to be seen, which only want rather more sunshine to bring out their lusciousness. There would be fewer failures with this valuable fruit if the sites were better drained, and a good proportion of chalk, mortar, or lime rubbish mixed with the soil. Apricots will not grow in a soil deficient in lime, and should never be planted in a rich compost, as that promotes a rank, gum-inviting growth at the outset.

Peaches and Nectarines were much affected by leaf blister early in the growing season, but have rallied surprisingly, and good crops are the order of the day. Waterloo, Early Alexander and Amsden June have already given ripe fruit, but the rains cause the more forward to crack rather badly.

Figs.—In the neighbourhood of Wells, and again near Yeovil, I have noted good crops of White Marseilles and Brown Turkey, the less

reliable Brunswick and Negro Largo also giving a few fruits.

Gooseberries were a heavy crop, but those who tried to save any to ripen must have been disappointed with the flavour of most of them. Only Whinham's Industry and Red Warrington have kept well, and the flavour of the former is second-rate.

Black, White and Red Currants all gave very heavy crops, but the first-named ripened somewhat prematurely in the strong, dry heat prevailing. Raspberry canes were much crippled by frosts, and the crops of those uninjured suffered from the drought.

Strawberries promised to be unusually plentiful, and so they were for a short time, but the drought spoilt the crops in many places. It was the old beds on shallow, hot soils that suffered the most. Royal Sovereign gave great satisfaction wherever given a fair trial. Filberts and Cobs are only moderately plentiful, but I never remember seeing the Walnut trees so heavily laden as they are this year.

Somerset. W. Iggulden.

SOUTHERN.

Aldenham House, Elstree.—The fruit crops here and in this locality are, on the whole, good, and except in a few cases show little ill effects of the past severe winter. Raspberries were almost ruined, most of the canes being quite killed. Figs on walls that were not protected were killed to the ground. Having a good depth of soil resting on clay, we did not suffer during the late drought so badly as some people. Up to July 17 we had only registered 7·70 inches of rain, our average fall for the year being 24 inches. From July 17 to 30 we have had 4·34 inches. I never saw the Apple crop look more promising. The trees are clean and the fruit swelling very satisfactorily. Very fine are King of the Pippins, Cox's Orange Pippin, Scarlet Pearmain, and Hanwell Souring. Pears a fair crop. Plums good. Apricots much under the average; the trees bloomed but very little. Cherries of all kinds excellent; also all kinds of small fruits, except Raspberries. Nuts of all kinds plentiful.—Edwin Beckett.

Mereworth Castle, Maidstone.—There is a very good crop of Apples. Blenheims look well, and the trees are in most instances heavily cropped. Lord Derby, Warner's, and many other earlier sorts are also producing an abundance of fruit. Pears scarce. Nuts a fairly good crop. Peaches and Nectarines good. Cherries excellent; the dry weather just suited them. Of soft fruits there have been good crops, but the season, owing to drought, was very considerably shortened. Damsons good, but Plums thin.—H. Markham.

Bristol House, Putney Heath.—The Apple crop is very good in this neighbourhood, and since the rain swelling up fast. Pears average crop. Plums medium crop. Peaches and Nectarines good crops, trees clean and healthy. Morello Cherries good crop and fruit fine. Red, White, and Black Currants good. Raspberries small at first, better since the rain. Gooseberries good crop, but the weather was too hot for some of the sorts in the full sun, although mulched and watered. Strawberries good both in quantity and quality. Peaches and Nectarines never suffer from blister here. Cellini and Ribston Pippin Apples are free from canker and constant bearers.

Vegetables on the whole very good. Brussels Sprouts, Kales, Broccoli, &c., are looking well. Onions smaller than usual; also early Potatoes on poor, light soil, but on good soil Potatoes are very good. The soil here is light, and the subsoil a loose sandy gravel. The garden is just level with the top of the cross on St. Paul's, so that a dry, hot season affects it very much, and entails much labour in mulching, watering, &c.—Wm. Stanbury.

Addington Manor. — Generally speaking, notwithstanding the intense and long-continued frost we experienced in the month of February and the almost unprecedented rainfall up to the end of June (6½ inches), both vegetable and fruit crops have done very well indeed in this locality. Strawberries an immense crop, assisted only by one good watering during the dry period. Raspberries and Currants of all kinds fine crops; also Gooseberries where the bushes were not injured by the bullfinches. Plums and Pears a good average. Apples on espaliers and on young trees good crops.

Some vegetables, such as Brussels Sprouts, the different kinds of Kale and Broccoli, were rather severely handled by the February frost, particularly between the 6th and 10th. Summer crops without exception have done and are doing well. We have had plenty of rain since July 18—rather over 3 inches.—J. Matheson.

Poles, Ware.—The Strawberry crop has been exceptionally good in this locality, notwithstanding the dry season. Laxton's Noble, Duke of Athol and Sir J. Paxton among early sorts, and Dr. Hogg and Latest of All, of late kinds, have withstood the drought better than other varieties. Raspberries a heavy crop, though the fruit is small. Hornet is unquestionably the largest fruit and freest bearer of any grown here. Black Currants abundant, as also Red and White, but owing to the dry weather the birds considerably thinned the two latter. The Gooseberries also suffered from the same cause, but at an earlier date, the bushes having been denuded of buds. Cherries (sweet) a good crop; Morellos good. Plums planted against walls in the various aspects are carrying a heavy crop. Standard and bush trees, with the exception of Bullaces and Damsons, are very thin. The same applies to Pears, the cordons especially promising well. Apricot trees died back more than ever this year; the blossom was very sparse, but distributed fairly over the sound branches of the trees, and owing to the excellent weather they had during the setting period the crop may be called a fair one. The Apple trees are heavily laden. The crop of Quinces is exceptionally heavy. Peaches out of doors are promising well; Hale's Early and Early Alexander are being picked now (July 25), and are remarkable for their flavour and high colour. Medlars and Filberts are promising well.—A. Wallace.

Caversham Park, Reading.—The winter did great harm to the kitchen garden crops; Cabbages, Lettuces and Globe Artichokes were destroyed, and, with the exception of Late Queen Broccoli and Sutton's Safeguard, the garden was bare of vegetation; in fact, the most total destruction I ever remember. Shrubs also suffered very much. Fruit trees seem to have benefited, for never do I remember better and cleaner crops of many kinds. Strawberries a good crop, although some varieties appeared almost destroyed, especially James Veitch, which is not so hardy as other kinds, a fact I only discovered this year, particularly those in pots which did not force well after the severe winter; nothing but the crowns survived. Plants of the same kind in the open beds gave fair crops, yet these looked as if a fire had gone over them. Most of our Strawberries gave an average crop, all small fruits the same, Gooseberries being the only exception. The most noticeable feature of the fruit crop here is the entire absence of insect pests, Plums, Peaches, Cherries and other trees being perfectly clean. I cannot say the Pears and Plums are as heavily cropped as last year, but there is enough. Apples we have had to thin, and although the dry weather has been of long duration, the trees remain healthy, the fruit of an average size.

With the exception of Peas, vegetables have been very good, especially on well-trenched ground. Scarlet Runners came in earlier than I ever remember. Potatoes where planted early are very good, but I fear where the haulm is left they will grow out a good deal; no disease has been found. Now plenty of rain has fallen the crops generally are looking well, although on the light chalk hills near here, where crops were put in late, I fear a total failure will ensue.—Chas. Ilott.

Buxted Park, Uckfield.—The season of 1895 will in this district be long remembered as one of the best, taking it all round, for hardy fruit; true, there are some blanks and slight crops amongst the Pears and Plums, but, as a rule, all others are a full crop. On looking over our orchards containing 100 or more of the leading kinds of Apples, there are but few that have to be recorded as blanks, and in many instances the trees have to be severely thinned to induce the fruit to swell to anything like its full size. Our soil is a heavy loam, of poor quality, resting on sandstone rock containing a large percentage of iron, which has the effect of causing some varieties to canker badly, such, for example, as Tom Putt, Herefordshire Pearmain, Golden Harvey, Lord Suffield, Golden Russet, Ribston Pippin, New Hawthornden, Cellini, Claygate Pearmain, and others. On the other hand, there are many varieties that grow exceedingly well, and amongst these I may mention Mabbott's Pearmain, Seaton House, Brownlees' Russet, Loddington, Baldwin, Sandringham, Baumann's Red Reinette, Tower of Glamis, Bramley's Seedling, Mannington's Pearmain, Golden Nonpareil, Ecklinville, Lady Henniker, Duchess of Oldenburg, D. T. Fish, Alfriston, Yellow Ingestre, Cox's Pomona, Lane's Prince Albert, The Queen, Pott's Seedling, Yorkshire Greening, and Hanwell Souring. There are a few varieties which have no fruit this season, but why this should be so I do not understand, seeing that they flowered well and were treated in every respect like the others. Amongst these are Flower of Kent, Gloria Mundi, Sturmer Pippin, Gooseberry Pippin, Cornish Gilliflower, Waltham Abbey Seedling, Golden Knob, Gravenstein, Kentish Fillbasket, and American Mother. In early spring some of the trees were infested with the caterpillar, but to no great extent. Owing to the long spell of dry weather the fruit is not so large, but since the rains it has swelled wonderfully, so that we may hope for good samples where the trees are healthy. On walls the crops of Pears are fair, but in the open there are not many kinds that have a full crop. Amongst those varieties that call for special mention in this respect are Souvenir du Congres, Marie Louise, Passe Colmar, Jargonelle, Fondante d'Automne, and Citron des Carmes. Plums for the most part in the open are a failure; there are some, however, that are carrying fair crops, such as Blue Perdrigon, Orleans, Early Rivers, Prince of Wales, Monarch, Archduke, McLaughlin, Victoria, Cox's Emperor, and the Czar. These kinds seem hardy, having suffered but little from the severe winter, though on our strong soil they make robust growth. Damsons suffered with us very severely last winter, especially Frogmore Prolific and Shropshire, most of the young shoots and many of the older ones being split by the frost and killed. Farleigh, however, did not suffer so much, and this is giving us a few fruits from late blooms that opened in May. In most places in this district Damsons do fairly well, particularly the Cluster. On heavy soils Plum trees make too sappy a growth, which does not always get well ripened; hence the reason they suffer so much in winter. Where the soil is moderately light and well drained they do fairly well, especially those previously named. Many of the new varieties are of first-class quality, especially when grown against a wall, and though the present is not a favourable season some are carrying good crops. Late Rivers, though it does no good in the open, is very good on a north wall; the same may be said of Grand Duke. This fine Plum cannot be too well known. Monarch, La Delicieuse, Washington, Coe's Golden Drop, McLaughlin, Kirke's, Archduke, and White Magnum Bonum are all useful when planted on this aspect. Amongst the best flavoured Plums when grown on a south or west wall I may name Green Gage, Jefferson's, Kirke's, Transparent Gage, Bryanston Gage, Angelina Burdett, Coe's Golden Drop, and McLaughlin. Cherries have

been an abundant crop, and the fruit has been finer this season than I ever remember it. Florence has been extra large, many of the fruit being nearly 3½ inches in circumference from trees growing on a north wall. Morellos, too, are very good. The dry season on our cold, heavy soil seems to have suited them. Apricots are a full crop. As a rule these do not do so well on our wet land, but this season seems to have suited them admirably. Peaches, though they suffered somewhat from blister in the early part of the season, have now outgrown that malady and are carrying fair crops of fruit. Bush fruit of all kinds has been plentiful, and though Black Currants were not so large as we sometimes have them, Lee's Prolific and Black Naples were both very good. The Red varieties were exceptionally fine, particularly Red Cherry, Raby Castle, and Grape. Gooseberries where the bushes did not have the buds picked out have been an excellent crop, the fruit being both large and of good quality. Raspberries suffered much from the frost, many of the canes being killed to within a foot of the ground. The dry weather, too, has had a serious effect on the fruit, for it has neither been so large nor so well flavoured as in some more favourable seasons. Superlative and Prince of Wales have been the best; both of these kinds are still giving us some good fruit, and though somewhat damaged by the heavy rains, it is still very useful. Strawberries were a most abundant crop with the exception of some of the more tender kinds, which were killed by the late severe winter. The fruit, however, in many instances was small and without that juiciness it has during a more favourable season. Still where the ground was in good heart and from young plantations some of the fruit was exceptionally fine. Strawberries as a rule do not suffer much during a dry season on this soil, for, being so close, it holds the moisture, particularly if mulching is done before the ground gets dry. Nuts are very plentiful, though Cobs are not quite such a heavy crop as I have sometimes seen them. Filberts and Walnuts are very full. Mulberries and other hardy fruits of a less interesting nature are more plentiful than in some seasons; therefore, taking all into consideration, this may be considered one of the most favourable fruit seasons we have had for some time, and though there may be a lack of Plums and Pears, this is more than counterbalanced by the splendid crops of Apples and other fruit.—H. C. Prinsep.

Old Warden Park, Beds.—Apples are a good average crop, trees very healthy and the fruit swelling freely. Pears are generally a very thin crop, fruit small on bush and standard trees, but better on walls. Cherries are a good average crop, but rather small. Plums under average on bush and standard trees, better on walls. Apricots very scarce indeed, but the trees are very healthy and free from insects. Peaches and Nectarines on unprotected walls are good; the fruit is rather small, owing to the drought, but improving since the rains. Strawberries are over average; the best results follow on well-cultivated ground, deeply trenched and well manured. Raspberries, Gooseberries and Currants exceptionally fine. I consider Superlative the best Raspberry grown. Nuts over average, Walnuts exceptionally heavy crops.

Early Potatoes are good, but crops very light, owing to the long drought. Late varieties are looking very promising after the late rains. Beans, Peas, Cauliflowers, &c., have been scarce and rather poor, owing to the long drought.—G. R. Allis.

Elvetham Gardens, Winchfield, Hants.—The past winter does not appear to have injured the fruit trees to any serious extent, but it was most disastrous to Roses, shrubs and coniferæ. The fruit crop here varies. Pears average, Plums partial, Apricots on open walls failed to flower; Peaches, where protected, average crop. Apples are a good crop, and the splendid rain we had on the 18th July and following days will help to swell them up to a good size. Strawberries have been abundant and good, but from the intense heat and drought were soon over. Raspberries, Gooseberries, Red, White and Black Currants average crops and fruit fine. Cherries a splendid crop.

Early Potatoes very light crop, but good in quality. Rainfall for the month of July, 4·59 inches.—Thos. Jones.

Stanmore Park, Bishop's Waltham, Hants.—On the whole the present must be regarded as a good fruit season in this garden and in the neighbourhood. The recent long spell of dry weather hastened the ripening of bush fruit, and prevented it becoming so large as usual. Apples dropped a good deal, too, in consequence, when they should have been taking their first swelling. Insect pests have not been nearly so troublesome as might have been expected. Here and there can be seen a few orchards where Apple trees especially are defoliated—the work of caterpillars, but where care has been taken to prevent ravages of this kind, there is little cause for complaint. The average rainfall in this neighbourhood is 30·0 inches. Up to the present date (July 24) we have registered but 12·80 inches. During the months of May and June but 1½ inches of rain fell. Strawberries are largely grown in this neighbourhood, some hundreds of acres being under cultivation, for supplying such centres as London, Oxford, Birmingham, Manchester, Liverpool, Edinburgh, Glasgow, and even Belfast. From one small station — Swanwick — on the Fareham and Netley line, as many as 32,000 gallon baskets were sent away in one day (June 17), and for the six days following no less than 98,000 gallon baskets were dispatched from this one small station. This number represents no less than 262 tons of fruit, or a daily average of 43 tons. I mention these few facts to show to what an extent Strawberry growing has reached. This year picking commenced May 31. But few varieties are grown. Noble ripens its fruit first, followed by Sir J. Paxton and a local variety named Garnier. Sir J. Paxton is the sheet-anchor of the market men. Where one acre of any other variety is grown one hundred of this is cultivated. The crop was an extremely heavy one and the fruit of excellent quality, especially so where the subsoil is clay. It was considered to be much the best Strawberry crop for many years. Apples are a full crop, while the quality promises to be good. Where the soil is heavy the Apple scab is making its appearance upon the skin of some early varieties, notably Irish Peach, owing presumably to the warm showery weather experienced during the last ten days. The trees as a rule are exceptionally clean; red spider has attacked the leaves of some, but taken as a whole capital growth is being made by the trees carrying a full crop of fruit. Such varieties as Warner's King, Ecklinville, Mère de Ménage, Lord Suffield, Lord Grosvenor, Alfriston, Lane's Prince Albert, New Hawthornden, Yorkshire Greening, Hollandbury, Golden Spire, Keswick Codlin, and Grenadier are exceptionally heavily laden. Amongst dessert varieties, Blenheim Orange, Cox's Orange Pippin, Devonshire Quarrenden, Irish Peach, King of the Pippins, Ribston Pippin, Pine-apple Russet, Beauty of Hants, Red Astrachan, Lady Sudeley, Margil and Cockle Pippin have exceptionally heavy crops of fine fruit. Pears are rather thin, especially upon trees in the open. Wall trees have a fair crop of clean healthy-looking fruit. Marie Louise, Jargonelle, Pitmaston Duchess, Louise Bonne of Jersey, Fertility, Souvenir du Congrès, Beurré d'Amanlis, Winter Nelis and Passe Colmar have the best crops. Peaches are carrying heavy crops of good fruit. The trees look uncommonly well in spite of the severe winter. Some few late-ripened shoots were injured during the winter, but the trees are now well furnished with new growth. I gathered the first fruit of Alexander from a tree against a south wall on July 20, and from a tree of Waterloo on a west aspect I gathered ripe fruit on July 26. The latter-named is much the best of early outdoor Peaches; not only is it superior in flavour to Alexander, but it grows to a larger size. Grosse Mignonne, Bellegarde, Hale's Early, Dymond, Early Louise, Late Admirable and Walburton's Admirable succeed well every year. Cherries have borne immense crops of large handsome fruit, especially trees against walls. Varieties like Governor Wood, May Duke, Elton, Bigarreau Napoleon and Black Tartarian against a west wall have carried and ripened magnificent crops of fine fruit. Morellos on a north wall have borne equally heavy crops. The foliage is particularly healthy and large. There has been almost a total absence of black fly this season. Raspberries suffered much from frost; many of last year's canes were killed quite down to the soil. This applies especially to heavy soil, proving that the wet weather was not favourable to perfect maturation of the canes. Where they did escape the crop has been a heavy one, but owing to the continued drought the fruit was somewhat small. Superlative and Northumberland Fillbasket were the best varieties. Gooseberries and Currants of all kinds have borne heavy crops of good fruit. In some few instances the Gooseberry trees were slightly affected with red spider, but where prompt means were taken to check this pest but little harm was done. Walnuts and Filberts are bearing heavy crops; in fact, I never saw trees of the former carrying such a load of Nuts. Plum trees upon walls are heavily laden with very fine fruit. Such varieties as Orleans, Victoria, Green Gage, Jefferson, Washington, Kirke's and White Magnum Bonum are especially noticeable for their heavy crops. I never saw the foliage looking so healthy as at the present time.—E. Molyneux.

Garden Flora.

PLATE 1027.

THE APHELANDRAS.

(WITH A COLOURED PLATE OF APHELANDRA NITENS.*)

To me it has been oftentimes a matter of very much surprise that these handsome plants have not been grown more extensively in private gardens. By many they do not appear to be known sufficiently well to claim at least a small share of attention. They have many advantages in their favour as decorative plants, whilst the showy spikes of flowers in a cut state are totally unlike anything else. These spikes, be it noted, may be cut in most cases of considerable length without any harm to the plants. The season of flowering extends from August in the case of A. Leopoldi, to December in that of A. aurantiaca and its dwarf form, A. aurantiaca Roezli. This covers a season when plants of such distinct and showy character are indispensable in many gardens. As market plants they can scarcely be recommended unless it be in the case of the last named variety, This, however, instead of being in the slightest degree against them, is, on the other hand, in their favour, in my opinion, by reason of their distinct character.

Aphelandras are all of easy growth, thriving well in any average stove temperature, their culture coming under the same head as that of Justicias and Scutellarias, save in that they are best kept at all times in the stove, whereas both of the last named genera may be grown in a cooler temperature during the summer. After flowering they should be kept more on the dry side so as to give a partial rest, being again started into growth in the spring, as with Allamandas and Clerodendrons. Thus they take but little room for from three to five months out of the twelve; this alone is a feature worth noting. When quite rested and the foliage dropped or dropping, they may be pruned back to the base buds of the previous growth, then the pots can

* Drawn for The Garden by H. G. Moon in the Royal Gardens, Kew. Lithographed and printed by Guillaume Severeyns.

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APHELANDRA NITENS

be stood closely together, but the soil should not be kept absolutely dry so as to cause the wood to shrivel. At such times a shelf is not at all a bad place for them or a pit with a temperature not lower in cold weather than 55°. A good time to start the earliest flowering kinds is during February and the latest in March. The omission to carry out the pruning as indicated will result in leggy plants and a less vigorous growth; do not therefore omit it on any account. The balls should be reduced at the time of re-starting, just as with Poinsettias, so as to allow afterwards of an additional shift when this is seen to be needed as summer progresses. Avoid overpotting at all times, so as to keep a good proportion between the plants and the pots. The best soil to use is light loam and peat, or good leaf soil in place of the latter if more convenient, sand being used freely and firm potting carried out. No stimulants will be required until the flower-spikes begin to show, then slight applications will assist the free-growing kinds. Propagation is easily carried out either by cuttings or by seed. The young shoots in the spring strike freely enough when taken off with a heel, using nearly all sand, and plunging in bottom-heat with plenty of atmospheric moisture to prevent any drooping of the foliage. These plants for the first year should be grown on without stopping, thus carrying one spike to each in the respective season. Older plants, it should be noted, may need one stopping, so as to equalise the vigour of the shoots. But little shade is needed, the object being not so much that of securing large foliage as a close compact growth. The usual system of

Propagation

appears to be by means of cuttings, but from practical experience I have found in the case of one variety at least that seedlings are preferable; whereas in that of others when the seed ripens by all means make use of it as a means of increase. The variety in question is A. aurantiaca Roezli, which as a dwarf decorative plant is extremely useful in small pots, flowering from seedlings when less than 1 foot in height. The seed-pods must be closely watched, otherwise when searched for the seed will be found to have vanished, the seed capsules having a propelling power furnished in some way when they burst, so that the seed is scattered to some considerable distance beyond the pots. To prevent the loss of seed in this way it is a good plan to tie each seed-bearing spike up in tissue paper as this stage approaches, or else to watch very closely and cut them off as soon as the lowest pods show signs of bursting. The seed may be sown at once if need be, or within a few weeks if more convenient from point of warmth, being afterwards carefully attended to as seedlings, first as to pricking off when sufficiently large, and then potting singly into small sixties, afterwards giving a shift into large sixties, or into forty-eights in the case of the strongest plants. These seedlings should never be potted the first year into larger pots. A good position to keep them in will be a shelf, so that plenty of light is afforded in order to keep the growth close and compact.

The usual insects that infest stove plants will give trouble if not properly guarded against, the worst of these being the mealy bug and the brown scale; the black thrips will also disfigure the foliage, but all of these may be kept under with ease, bearing in mind the many efficacious present-day insecticides.

Varieties.

There is some considerable diversity in the varieties under cultivation in habit, foliage, and the colours of the flowers.

A. nitens, the variety now forming the coloured illustration, is in every respect quite distinct; the growth is close and compact; it has dark coloured foliage, lustrous or shining on the upper surface and dark vinous purple beneath, being also of a leathery substance; the colour of the flowers is well indicated in the plate. This species was introduced by Messrs. J. Veitch and Sons from Colombia, having been first distributed about twenty-five years back.

A. aurantiaca is one of the oldest kinds grown in gardens, as it is one of the best for flowering from October to December. When in bloom it makes a most brilliant display, its dense branching spikes being very fine; the flowers are of a rich orange-scarlet shade and are produced in succession for some considerable time; the foliage is somewhat large, dark green in colour, with a pale silvery grey suffusion. I have grown this variety as a specimen with from ten to twelve growths and as many spikes, thus making a brilliant display.

A. aurantiaca Roezli is a dwarf form of the preceding with the silvery suffusion on the foliage much more decided. As a dwarf plant of compact sturdy growth it is quite a gem when well managed (as from seedlings). It flowers during December, being good at Christmas time; the flowers are brighter in colour than those of the type, whilst the spikes are not so large. As a decorative plant in its season it is one of the very best.

A. cristata is the oldest species under cultivation as it also is one of the very finest. A few years ago Mr. Bain showed it in splendid condition from Sir Trevor Lawrence's collection at one of the R.H.S. meetings; the spikes then shown were very fine, proving at once its claim to far more notice. The growth is of the two more robust than in A. aurantiaca, whilst the foliage is of a darker green and also larger; the flower-spikes are more branched and the individual blossoms larger as well. This species in the time of specimen plant growing used to form a striking object at the autumn shows of the old Brighton Society from Mr. Atkins when at Viscount Gage's, Firle Place, Sussex.

A. Leopoldi is a variegated variety, more striking perhaps in its foliage, which is dark green with white venations; the habit is compact, but the growth is rather slow; the flowers in this instance are of a rich shade of yellow.

Three other distinct varieties are A. Porteana, A. fascinator and A. punctata.

Southron.

The Week's Work.

KITCHEN GARDEN.

Earthing up Leeks.—Where early Leeks are a speciality, those which were raised in heat in January will by this time have grown to a good size and may be partially earthed up. Where several rows are in one trench great care is necessary in order to prevent any soil from getting into the centres of the plants. A good way to prevent this is first to tie a band of soft matting round the lower part of the plant and to use a thin board, this being held by one man against the row while a second puts in the soil with a spade or shovel, the board afterwards being lifted gently out and the soil worked around the stems with the hand. When only one row is grown in each trench it may be earthed up so far similarly to Celery. Leeks being such thirsty subjects, it will be well, in spite of the copious rains which have fallen of late, to give the trench a good soaking with farmyard liquid the day previous to earthing; this will greatly aid the plants to swell out at the base during the final stage of growth. Successional lots coming on either in trenches or on the level ground must now be looked to and kept free from weeds, as if these are permitted to accumulate, the same evil, namely, dirt entering the centres, is liable to follow. In cleaning if the weeds have grown tall, hand-weeding in the first place is the best, using the Dutch hoe afterwards, the same remarks being equally applicable to young Lettuces and Endive, which are easily spoiled by the soil getting into the hearts.

Sowing Cauliflower.—The principal sowing of Cauliflower which is to be planted out in hand-lights as a first early batch for cutting in May should now be made. I prefer an east border, as then should the weather be very favourable to growth the plants are not so liable to get too forward by transplanting time as when grown on a sunny south border. The small forcing varieties should not be sown now, spring being the best season for this, in a gentle warmth in boxes. I am sowing Walcheren and Pearl, the former coming into use first by about ten days, and being less liable to button than Early London, unless one has a special strain of his own. Sow broadcast, covering with a fish-net to protect from birds. Where plenty of room can be spared for early Cauliflowers, other varieties may be sown. Eclipse, although strictly speaking a late summer and early autumn variety, may be sown now to follow the sorts above-mentioned, and indeed some gardeners sow Autumn Giant at the end of August and beginning of September for producing heads during July. Thus treated, Autumn Giant does not grow to such a large size and is most useful for table. Be careful not to sow the seed thickly, as in wet weather the young seedlings if crowded soon damp off. Thin out as soon as the plants can be handled, this being not only better for them, but a saving of labour as well. The sooner now the plot for these early Cauliflowers is prepared the better, choosing ground that has not grown any member of the Brassica tribe for some time, and that has not been smothered up with foliage of any kind throughout the summer, as a sweet, healthy root-run is very essential for this crop, the reverse only encouraging grubs and clubbing. Incorporate a good sprinkling of fresh soot and a little gas lime or burnt refuse, and avoid rank green manure, this frequently containing the germs of destructive insects, which ruin the plants in their infancy. The seed for producing plants for wintering in pots or frames should not be sown until the very end of the month or first week in September, or the probability is they will be far too forward for the purpose, and will button in even while in the frames. This is a mistake only too commonly made. Where Walcheren growing on Celery ridges is now hearting in, the outer leaves should be bent down to protect the heads from sun and air both for the purpose of retarding them and preserving the colour. If a glut is feared lift the plants and lay them in behind a north wall, well soaking the roots; here the heads will last in an eatable state for some time. I have frequently kept Cauliflowers wanted for exhibiting for ten days by lifting them in the nick of time and putting the roots, with as much soil attached as possible, into a tub of water, this just covering the ball, and placing them in a cool, dark room.

Winter Turnips.—In midland and northern localities from August 10 to 15 is a good time to sow the first lot of Chirk Castle Blackstone Turnip for winter use. If advantage was taken of the clearance of early summer crops to prepare the ground according to previous advice, it should now be in good order for the seed. This should be sown broadcast and not too thickly, a surface sowing of guano or some approved fertiliser being given as soon as the crop is thinned. Orange Jelly is a good winter Turnip, and although perhaps not quite so hardy as Chirk Castle, will stand severe frost without succumbing. I advise a second sowing of the latter about the first week in September, as even during frosty weather this Turnip will increase slowly in size and come in most useful at the new year. Where the soil is light and stony it is a good plan to run the garden roller over the surface after sowing. A watch must be kept as soon as the plants appear, as fly will sometimes play havoc even at this advanced time of year; dusting with lime and soot or wood ashes will check the pest, and also assist

the crop to make a free growth. The best and most open position need not be selected for this crop, as Turnips will do very well even in the partial shade of trees.

Transplanting Coleworts.—The plants resulting from the first sowing of this useful vegetable will now be ready for putting out, and as the ground, both of seed beds and open quarters, is in a moist condition, transplanting should prove an easy operation. As I previously stated, I always plant a quarter from which old Strawberry plants have been removed, and in this case drills are not necessary, as the ground, being close beneath, retains the moisture well. On loose, freshly-prepared ground, however, drills will be necessary. Plant 15 inches apart all ways and water home, keeping a sharp watch for underground grubs, which are usually very troublesome in newly-planted Colewort beds. Lime applied to the surface is of no use whatever for this pest, nothing but searching beneath the soil round the stem that has been cut off being of any avail. Several transplantings, even of the first sowings, may be made as the plants get large enough, and the later sowings, which will be ready for putting out at the beginning of September, will afford nice useful heads in January and February. Where sowing has not yet been done no more time should be lost.

Onions.—The final cleaning by hand-weeding of spring-sown crops of Onions must now be given, as also one more broadcast sprinkling of artificial manure; this will carry the crop on to maturity. Where thick necks abound, go over the bed with a rake and bend down the tops over the bulbs to check the flow of sap and assist in swelling out the bulbs. These, after storing, should be used first, as they never keep so well as thinner necked bulbs.

Sowing Tripoli Onions.—As a rule, the present is a good time for getting in the seed of Tripoli varieties, and if the ground was prepared a few weeks ago, as advised, so much the better, as firmness is one of the best guarantees of a satisfactory growth both in autumn and spring-sown Onions. Avoid thick sowing, as the spring bulbs are much loosened by thinning when this is the case, which allows of their being blown about by wind and weakened by frost at the base. After sowing the seed, give a good sprinkling of burnt refuse or wood ashes in the drills before covering in, then tread and retread the surface, using the roller where the ground is light and shallow. For an early white Onion the old Queen is most useful, doing its work in less time than any other of this section. I have lately sown several sorts of the so-called spring Onions at the same time, and find them equally as hardy as the Tripoli, Trebon and Cranston's Excelsior being two sorts especially suitable for autumn sowing. Where young Onions are likely to be in request in autumn for salads, I would advise sowing an extra row rather thickly, so that the main batch may be freely thinned out when in quite a young state.

J. Crawford.

HARDY FRUITS.

Peaches and Nectarines.—I never saw these trees looking better than at the present time. The hot weather brought on the American kinds earlier than usual, Alexander and Amsden June being ripe the second week in July on a south-west wall. Such kinds as Condor, Hale's Early and others are now giving nice dishes. Nectarines are bearing freely and look most promising. Unfortunately, we have not got any very early Nectarines, and should the new kinds prove good in the open they will be of much value. Now is a good time to assist trees bearing heavy crops in the way of liquid manure and a mulch of decayed manure on the surface, giving heavy soakings of water about twice a week on light soils. These trees often suffer from want of moisture at the roots and red spider attacks them, causing the fruit to be small and worthless. The trees being planted close to walls, are often dust-dry at the roots in such seasons as we have had recently. Canker and disease would be arrested by giving more food and moisture and getting a clean, free growth. It is surprising what a lot of moisture these trees will take when in a vigorous state. Giving ample food and moisture at this season takes less time than applying remedies to counteract disease. When applying manure in a liquid state it is best given in the evening or in dull weather, and those who cannot obtain good liquid may with advantage give a liberal top dressing of some artificial manure. The final thinning of the fruit of late kinds should now be attended to, and leaves cut away to give colour and good flavour. Any shoots should be tacked in if required for covering bare places and the leaders given support. The removal of foreright shoots should receive attention, and those bearing fruit may be cut back to within three or four buds of the fruit. With wall trees thinning out of useless shoots is an important work, as crowding means unripened wood.

Protecting the fruit. — Ants have been troublesome among the early Peaches and Apricots, and I find they do not like going over sawdust soaked with petroleum placed at the base of the trees. Slugs will also be a nuisance after heavy rains. These are readily got rid of by persistent looking after at night. They are also readily trapped by placing large Lettuce or Cabbage leaves near their haunts and destroying them when found. Wasps promise to be numerous, and probably we may get as many as in 1893. They can be readily caught in large-necked bottles half filled with beer and sugar. Scott's wasp destroyer is also efficacious, but should be used with care, being poisonous. Earwigs are often troublesome, and should be trapped with hollow Bean stalks and small flower-pots filled with hay. A light covering of tiffany or muslin will protect the ripe fruit for a time, but if covered long the foliage suffers.

Apricots.—These require copious supplies of moisture, and even when the fruit is cleared there should be no lack of attention in the way of food and moisture. The trees should be encouraged to make strong leaders, these being often the salvation of the trees, and the earlier these strong growths are matured the better. Continue to stop foreright shoots; in fact, these are best pinched in a small state with the finger and thumb, not using the knife. Syringing overhead should be continued for some time after the fruit is cleared. This will keep red spider clear of the foliage and the young growths will mature sooner if growth is assisted. Mulching should not be neglected, as there is ample time for the roots to lay hold of the rich food given. Trees that have become bare by loss of branches may at this time have the shoots laid in, thus furnishing blank spaces, and by training now the growth will be better matured. Late varieties with heavy crops should be liberally fed, and young or newly-planted trees kept nailed to the wall to prevent loss of branches during high winds.

Plums are cropping very freely in most districts and are very early, such varieties as Rivers' Prolific and Favourite being ready the third week in July. These two varieties are valuable where early Plums are required. The latter is very fine grown on a wall and a sure cropper. With later varieties no time should be lost in feeding and keeping the foliage clean. Aphis this season has been troublesome. Those who have a good water supply can hose their wall trees and thus remove a large portion of the fly, but it does not kill them entirely. I have found Bentley's quassia extract the most useful. Plums that crack badly should be gathered a few days before using, and it is well to go over the trees before cleansing, removing useless shoots and laying in young growths, remembering that next year's crop will largely depend upon the young wood made this season. With trees ripening their fruits and in a dirty state it is not safe to use insecticides, as the fruit would suffer, and in their case clean water must be depended upon. Plums, unlike Peaches, do not like being denuded of their leaves, as the fruits colour freely when slightly shaded. To preserve the best late kinds it is well to shade with tiffany, and in removing shoots the growth of the tree should be considered, as some dessert kinds make little wood and require more care in stopping. Very heavy crops of any of the large cooking varieties should be thinned.

Cherries.—The trees, with the exception of Morellos, having ere this been cleared of the crop, daily syringing after a day's hot sunshine will retain a healthy green appearance and plump up the fruit-buds for next season. On light soils canker and loss of branches follow drought, and in heavy or clay land the surface roots should be encouraged by a good mulch of short manure. Morellos need covering with nets, as when fully ripe they protect them from hot sun and shrivelling.

Pears.—These are now turning in. Such kinds as Jargonelle and Williams' Bon Chrétien are better gathered a few days in advance of using; indeed, if sent long distances it is well to gather them when quite firm, as they ripen rapidly. The early kinds, such as Doyenné d'Eté, are not worth eating if left on the trees till quite soft, as they are then flavourless. Later kinds bearing heavy crops should be fed freely with liquid manure or a good fertiliser, the latter well watered in and a mulch given afterwards. Owing to drought and heat red spider in some soils will be troublesome, but may be got rid of by well syringing the wall trees at sunset. The lateral growths of cordon-trained trees should be stopped, but the leaders must be nailed in if the trees have not filled up the allotted space.

Apples.—The early varieties of eating Apples, such as Mr. Gladstone, Irish Peach, and Red Juneating, like early Pears, are best gathered before they are quite ripe. These will be followed by Devonshire Quarrenden, Worcester Pearmain, and Lady Sudeley, and need not occupy the winter store, room being found for them elsewhere. If the crop is not large it is well to gather them in small quantities from the trees, and thus lengthen the season. Many of the mid-season and late kinds have suffered from drought and have fallen badly, but with a good crop this need not be deplored, as the fruit left will be finer. Late kinds may be assisted with liquid manure. By giving a mulch of short manure or by feeding with liquid, the fruit will be finer and more valuable.

G. Wythes.

KITCHEN GARDEN.

CAULIFLOWERS.

Few vegetables require more generous treatment than early Cauliflowers, and the more so is this necessary during a dry season. Why Cauliflowers should fail at these times in some gardens may well be asked. Certainly good, close heads, and these of a delicately white colour, are not often seen. According to my observations there are more early Cauliflower failures now-a-days than in years gone by. It is only of later years that one hears so much of the benefits accruing by deferring sowing till the new year is well in. This, I think, is where the mistake lies; not that the system is really bad in itself, as many gardeners, myself included, have grown good Cauliflowers by the method. The plants are more liable to suffer from checks than can possibly happen by sowing in the autumn and growing them cool throughout. Nor can the plants produce heads fit for use earlier than autumn sown. Instead of there being so much extra care and attention needed to be bestowed upon the autumn-sown plants, I think I can safely say it is just the reverse. As a rule the mistake is generally in sowing too early, pricking the plants out in too loose a compost, and afterwards in coddling them too much. Either or all of these is

sufficient to mar the prospects of any Cauliflowers. Sown too early, and if the autumn should prove to be mild, the plants are bound to become overgrown. With the plants overgrown, the gardener becomes anxious to get them out in the spring before even the weather is suitable for their well-being, and, as any gardener knows perfectly well, checks from inclement weather stop growth, with the result of early buttoning. It is just the same with coddled plants, and pricking the plants out into loose soil in frames is equally injurious. It is useless to plant out Cauliflowers which have been wintered in frames if the soil will not adhere to the roots. Old potting soil is such a favourite medium for many purposes, that the majority of people when writing of Cauliflowers recommend such material for pricking out autumn-sown Cauliflowers. A worse material could hardly be recommended, as such will not hold together when lifted. Of course, if the plants are to be potted up it does not matter so much, but even in these cases the plants will be better by having the compost employed of a more holding description.

As far as my experience and observation of the practice in other gardens go, I find the first week in September quite early enough for seed sowing, and this could be taken as a guide for most districts. Recent notes in The Garden have suggested the most suitable varieties for autumn sowing, these being Early Dwarf Erfurt, Early London, and Walcheren. A variety not often seen recommended is the Large Asiatic. This is an excellent Cauliflower, and also forms a good succession variety to the two former. Earliness is also a point with these autumn raised plants, they being a decided advance over others sown in January, although by some growers these are supposed to have the advantage. To get Cauliflowers as early as possible, the plants must be pricked out under handlights, as with these there is no disturbance and they grow away direct. A few Cauliflowers grown in this way, or as many as handlights could be spared for, would prove most useful in any garden.

The seed should be sown in an open and sunny spot, the soil being light and friable. I select a portion of a south border, also sowing the seeds in shallow drills, and these thinly. Plants raised in this manner have stout stems, and are not liable to be affected with mildew or gangrene, this latter clearing the seedlings off wholesale. By the time the first pair of rough leaves has grown to a fair size the plants will be quite large enough for pricking out. As long as this can be done before the advent of cold weather it will suffice. For pricking out into frames, select a low frame in an open and sunny position, the frame also being set on a hard bottom. This is important, as if the base should be at all loose the plants will root deeply, when of course they will not lift readily in the spring. A firm ash bottom is the best, as the plants move off this material cleanly. Over the bottom place a layer of short rotten manure to the depth of 2 inches, this being levelled down with the back of a fork, and over this the same depth of holding soil with the addition of a little pulverised horse manure. Into this the little plants are pricked out 4 inches apart. At no time must the plants be coddled, severe frosts and heavy rains only being guarded against. For ordinary frosts a couple of mats will be sufficient protection, but in times of severe and prolonged frost the sides must be banked up with stable litter with sufficient on the glass to keep out frost, although a degree or two of this will do no harm. I have kept the plants covered up for a month, and at the end of this time they have been quite fresh. It is bad practice to uncover the frames daily in times of severe and prolonged frosts. Even if the sun shines brightly in the middle of the day such exposure only excites the plants. After the frost is past gradually expose the plants until it is safe to pull off the lights again daily. The surface soil will also be benefited by being lightly stirred, and if mildew appears dust with wood ashes. The plants will under this treatment grow sturdily, and when large enough the time will be at hand for transplanting, and which, as I have previously advised, must be done carefully, lifting with as large a ball as possible. I cut each plant out in squares with a clean and sharp flat trowel, and they never fail to become well established. The ground can hardly be too rich for Cauliflowers, and in planting it will be found advantageous to draw rather deep drills, into which set the plants, pressing the soil about the balls with the fingers, finishing off with a thorough watering. If the weather should prove dry, of course this will have to be repeated. Planting in drills will enable the water to reach the roots, while another advantage of the drills is that they afford some protection during the earlier stages. Later on, either after a watering or rain, the soil can be pulled round the plants with a hoe.

If the plants are to be potted up use what are termed 48's. After potting, plunge to the rims in a cold frame, treating exactly as for pricked-out plants as regards free ventilation and protection, only care must be taken that at no time, especially in the early spring, must they suffer from want of water. The handlight plants for early cutting must either be accommodated with a south border or an open position well open to the sun. In either case it is best to prepare slightly raised stations for each handlight.

A. Young.

Sutton's Mammoth White Runner.—This is a capital Bean, and well worth growing by all who have profit in view. It is rather later coming into bearing than the old Scarlet Runner, but this is rather an advantage than otherwise if sown at the same time. The growth is very vigorous, and the yield of long dark green pods prodigious. Its white flowers also render it attractive in the kitchen garden.—N.

French Bean Negro Longpod.—This Bean—if we may judge by the few places in which it is now seen—has fallen into disrepute, yet for all that it is one of the most useful of its class. It has a good constitution, is not so easily affected by cold winds as Canadian Wonder, and is rather earlier in coming into bearing than that variety. Its colour is good and the flavour delicious. I hope this good old Bean will not be allowed to go out of cultivation.—C. H. N.

Potato Sutton's Seedling as an exhibition kind.—Amongst all the sorts of second early high-class Potatoes I do not think a better can be found for exhibition than Sutton's Seedling. It matters not whether shown in a collection of vegetables or as a single dish, it always tells if well grown. When speaking of Sutton's Seedling as an exhibition Potato, however, it is but fair to say that for cropping and quality also it has few, if any, equals. Windsor Castle, a Potato somewhat similar in size and shape, is very hard to beat either for showing or eating, while it is a prodigious bearer. It is in season from a fortnight to three weeks later than the Seedling.—C. J.

Transplanting spring Onions.—Some time ago a writer in The Garden advised raising the Spanish section of Onions in boxes in heat in spring, and after duly hardening them off, planting out on the open quarters, contending that Onions so treated were not so liable to the attacks of grub on hot, shallow soils as were those sown in the ordinary way. From what I have this year seen, I am inclined to think that there is much truth in the statement. A neighbour of mine, who for many years had failed to grow either Tripoli or spring-sown Onions, adopted the above-named plan, with the result that at present he has a grand lot of bulbs, which are sound and free from all traces of the maggot. Probably the earliness of the young seedlings enables them to grow beyond the stage at which the maggot usually attacks them. Those troubled with this pest would do well to give the transplanting system a trial, using plenty of soot at digging time.—J. C.

Early Brussels Sprouts.—I have never been able to see the advantage of sowing this vegetable so early in the year as some do, especially in the south of England; in fact, I seldom sow the seed till March even for my earliest batch, and then in the open air. I am from this sowing able to pick good sprouts in October, which is in my opinion quite soon enough, as Brussels Sprouts, like many other winter greens, are always much improved by a few frosts. Some gardeners I know sow seed in February in heat, thinking they cannot be too soon. The result is that on good ground the plants by August attain to a great size, and during September coarse open sprouts resembling small Cabbages are produced, and that, too, when there is plenty of more seasonable vegetables in the garden. The fact that in my midland garden good sprouts are obtained by October from March-sown seed is, I think, sufficient proof that very early sowings are quite unnecessary.—H. C.

Open-air Tomatoes.—There is no doubt that with our improved summers Tomatoes may again be successfully grown in the open air, even where there are no walls, always provided perfect shelter can be afforded. The other day I saw in the home nursery at Gunton, within four miles of the sea, a splendid lot of plants carrying fine clusters of fruit, some of which were ripening. It is but right to say that the situation is highly favourable, being screened from winds from every point, and the soil warm and well drained. The plants were growing trained to stout stakes on the single rod system, being slightly mulched with short litter, and amongst the several sorts Ladybird was most conspicuous. Mr. Allan considers this variety better than Ham Green. When we consider that Norfolk is not one of the warmest counties, surely in the more southerly ones open-air Tomatoes might be made to pay if the right sorts were chosen and pains taken in their culture. It seems to me that the plants are often unduly exposed in hardening off after coming from a warm, moist house, the foundation of disease thus being laid. Although a sunny position is imperative when planted out, if the same is exposed in the least degree to cutting winds, failure may be expected.—J. C.

The Potato crop.—I have under my control just now a dozen diverse trials of Potatoes in Surrey. These trials comprise some seventy sorts, and are in area ranging from 10 rods to 20 rods. Also they are on all sorts of soils, clay, stiff loam, bog, chalk, sand, and combinations. In every case the breadths look wonderfully well. The same may be said of Potatoes in every part of the county; indeed, present appearances indicate an immense crop of tubers later. The earliest and tenderest sorts, now that heavy rains and a lower temperature have come, show evidences of spotting on the leafage—not of the Peronospora, but rather indications that the foliage of these varieties cannot withstand the change to colder weather. So far as all the second early and late sorts are concerned, the top growth is distinctly strong, indeed luxuriant, too much so in fact, especially that in great breadths a second blooming has resulted. In the earlier sorts, where swelling of the tubers was distinctly checked, there is much super-tuberating, but it is not possible to say how far that evil may have extended to the later ones, though it is hoped that it has not. We have had plenty of rain for the Potatoes, indeed too

much, and now badly need warmth and dryness. Generally I regard growth on all main crop varieties, owing to the long drought and now the excessive rainfall, as some two or three weeks later than usual; hence there will be all the more need for a prolonged and dry autumn. If, as is prognosticated, we are to have a considerable spell of this broken, wet, cooler weather, the effect on the crop may presently prove to be most disastrous. Our Potatoes are now at the mercy of the weather. If that be fine and warm, we may have one of the finest crops on record. If it be bad, then the result may be a misfortune.—A. D.

—— As a rule, except on cool, moist soils, first and second early crops of Potatoes have this year proved indifferent, and I have noticed at several exhibitions how much affected with scab the tubers have been. In my own garden, however, I have not seen a trace of disease until to-day, when I was sorry to find some affected tubers, and that, too, in a so-called disease-resisting variety. The freedom from disease in early and second early Potatoes this summer confirms the opinion I have before expressed, that the germs of the disease may be present, but that it will make no headway unless the weather be favourable to its development. As regards late field Potatoes in this district, the copious rains of the last fortnight came in the nick of time, and with a favourable autumn many confidently hope for an abundant yield. I think Renown will eventually become a very popular late Potato, and will when seed tubers are cheaper be largely grown for market. It is a prodigious cropper, almost as round as a cricket ball, while the flavour when cooked is delicious. It bears some resemblance to Schoolmaster, but resists disease better than that sterling variety.—J. C., *Notts.*

New Tomatoes.—Two comparatively new Tomatoes destined, I think, to make a mark are Duke of York and Chemin. Although I have not myself grown either, I have noted their characters in other gardens. A neighbour of mine has grown the Duke for two seasons and thinks very highly of it. Not only has it perfect symmetry, colour, and flavour, but what many of the finer looking Tomatoes lack, good cropping powers. Those who have opportunity for trying new Tomatoes will do well to give Duke of York a trial. Chemin I have only seen in one establishment, but I am much impressed with its general appearance, and should its flavour prove to be as good as its appearance, it will make an ideal lunch Tomato. Ladies generally object to very large fruit for eating in a raw state; hence the necessity for growing at least one medium-sized sort for that purpose. That Chemin is both prolific and early is proved by the fact that it was carrying more fruit than plants of several popular sorts growing in the same house, and that many of these were nearly fit for eating, while those on the other sorts were comparatively green.—C. N.

ORCHARD AND FRUIT GARDEN.

RUBUS CAPENSIS.

MR. LUTHER BURBANK, Santa Rosa, California, who sent us the photograph from which the illustration was prepared, in writing to us *re* Rubus capensis, says that it came to him by way of New Zealand from South Africa, and is probably the one Stanley speaks of as growing in places on the Dark Continent. The canes grow to a height of from 6 feet to 10 feet, bending over and rooting. The plant is covered with a short rusty down and a few short scattered prickles. The fruit is of a purplish wine or mulberry colour and of excellent quality, though the berries do not separate from the receptacle as freely as they ought.

Cherry Florence.—For late use this large, showy dessert Cherry is invaluable. Like other strong growing kinds, it does not commence bearing so soon as Governor Wood and Black Tartarian, but makes up for lost time in after years. I have a horizontal-trained tree on an east aspect at present bearing a nice lot of large highly-coloured fruit. One of its chief recommendations, in addition to size and high quality, is its long-lasting character, the fruit hanging for weeks in a sound condition if kept from birds.—J. C.

Planting out forced Strawberries.—It is an old plan to plant out forced plants of such Strawberries as Keens' Seedling, Viscountess, or indeed any of the early varieties, for furnishing a full crop of ordinary-sized fruit for general use the following year. In this case the runners are kept



Rubus capensis. From a photograph sent by Mr. Luther Burbank, Santa Rosa, California.

cut off. Lately, however, it has been found that by planting out some of the more delicately-flavoured and less rampant sorts after forcing, and keeping a few of the runners which these produce pegged down, these latter produce fruit of the first size and quite equal in flavour to that borne on the parent plant. Empress of India is said to do exceedingly well under this treatment.

Apple White Juneating.—I have before referred to the usefulness of this little Apple for very early work and of its suitability for training as an espalier. This year again our tree is loaded with fruit, which is very passable for dessert if eaten soon after being gathered. If laid by for long it becomes mealy and tasteless, a fault unfortunately common amongst all early Apples. Of course, the flavour of Juneating is not nearly so good as that of Irish Peach and Beauty of Bath, which ripen soon after it, but where earliness is a desideratum one or two trees as espaliers are certainly worth growing, as with nearly all other dessert Apples Juneating is of much better flavour from espaliers than from bush or standard trees.—J. C.

MELONS AT HILLSIDE, NEWARK.

A FEW days ago I inspected at Hillside, the residence of Colonel Newton, one of the most meritorious crops of Melons it has ever been my privilege to see. The plants occupied a house having an arched roof and running north and south, and were grown on what may be called the extension system, which has much to recommend it, and from which the largest, if not the best flavoured, crops of Melons are cut. Of course, the restriction system of culture in early houses is imperative, as their small size necessary for securing sufficient heat for the plants at that early date is insufficient for plants that are to be allowed to ramble, but for plants which are to ripen their fruit, say, at the end of July or beginning of August, commend me to a loftier structure and the extension system of growth. The Melons in question were planted on each side of the house, which is about 20 feet long and of good height, sufficient, in fact, to allow of a growth of 8 feet or 9 feet for each plant. The beds contain no hot-water pipes, but are heated by manure and leaves well trodden in and surmounted by a ridge of sound calcareous loam. Plenty of room is allowed between each plant, as close growth in the case of the Hillside plants would be ruinous, both the main stems and laterals being exceedingly vigorous and the leaves large and leathery. I was particularly struck with the various stages of growth the Melons were in, plenty of very large fruit being at the top of the trellis, the great strength of the laterals at that point not only enabling the Melons to set, but to swell away, instead of turning yellow and falling off as is frequently the case with the secondary set of fruit on more restricted and less vigorous plants. In houses like the one at Hillside little fire-heat is needed, as it catches the morning sun as soon as it rises and reaps the full benefit of that agent through the afternoon and evening, and by early closing the heat is retained well

into the hours of darkness. Mr. Day, Colonel Newton's gardener, finds these strong plants rather addicted to stem canker if great care is not exercised in watering, but with discretion in this matter and the use of dry lime directly the first trace of it is seen its progress is effectually checked. The varieties grown at Hillside are Royal Favourite, Imperial Green, and Best of All. The first I was much struck with, several of the fruit weighing quite 7 lbs., of a beautiful creamy colour, and closely netted. Imperial Green is a nice oval-shaped fruit of good colour and fine flavour. Best of All I have never seen so good in colour before, and Mr. Day may be congratulated on having such a true strain of this popular Melon, as many inferior ones are in the market. Some years ago Mr. Taylor when at Longleat used to grow that good old Melon, Meredith's Hybrid Cashmere, to perfection on the extension system. J. C.

A valuable early Plum.—When at the R.H.S.'s Gardens at Chiswick recently I noticed a Plum superior in every way to Rivers' Early Prolific and quite a fortnight earlier. It is named Early Favourite, and is a seedling, raised at Sawbridgeworth. The fruit is rather more oval than that of Early Prolific, medium sized, purple, juicy, and with a nice flavour. It is, in my opinion, much better for dessert than Early Prolific, being more sugary. Given a warm wall, it is a sure cropper; indeed, it crops too freely, severe thinning being necessary to prevent the tree being injured. It is a freestone. Grown on a south wall, it may be had ripe early in July. The raisers do not recommend it as a variety for growing as a bush.—G. W.

A Jargonelle Pear tree.—In The Garden of the 3rd inst. I note your observations in regard to a remarkable Jargonelle Pear tree said to have been planted in the year 1815, and producing at times as many as 2000 Pears. I have a Jargonelle tree in my garden, planted, I believe, in the year 1830, some fifteen years later than the one you mention. It is in the middle of a hedge, is about 25 feet high, takes its chance, for it is never either pruned or manured, and it invariably produces good crops of fruit; as, for instance, in 1893 it produced about 1500 Pears, last year nearly 2000, and I am sure this year it is bearing between 2500 and 3000 Pears. It has been in my possession for over forty years and I have never known it fail. With me this year there are exceptionally heavy crops of Apples and Pears.—C. L., *Newport, Mon.*

Morello Cherries on different stocks.—Cherries are much affected by gumming and canker, and to prevent this it is well to consider how the trees behave in certain soils, and to grow those kinds on the stock least subject to disease. It is very annoying when the trees have attained a fair size to lose a portion of them by canker; indeed at times the whole tree dies, and in many cases what little is left is so unsightly, that it has to be rooted up. Canker is often attributed to the soil being unsuitable. Doubtless such is the case in some places, but I am inclined to attribute some portion of the evil to the stock on which the trees are worked. I do not think the disease is caused by severe weather, as this season Cherries of all kinds have been abundant and good, thus showing that severe cold is not injurious, and my opinion is that, provided the roots are well nourished and there is a good top growth, there will be less disease. I have a great number of these trees in various forms, and of course not all on the same stock. The Mahaleb, I find, is the best stock on poor thin soil and the trees make more surface roots, and though more food in the way of mulching is required, there are much better crops and the trees make a freer growth with less canker and gumming. Those who fail with the Morello in this country would do well to purchase trees on this stock, as in a season like this the growth of the trees is all one could desire.—S. H. B.

APRICOTS.

The crop this season in many districts is not all one could desire; indeed, it may be termed under the average. This can doubtless be accounted for in various ways, the principal cause being that last autumn was not the most favourable for ripening the wood. Others doubtless may think the severe weather experienced early in the year may have had something to do with the failure of the crop, but I do not think such is the case, as our trees never looked better than they do now. So far there have been few losses from canker and what bloom there was set freely, and though much later it was strong. The worst losses from canker were last year early in the season before the fruits stoned. This followed a dry, hot summer, leading me to think the trees must at one time have suffered from drought, being on a raised sloping bank and in light porous soil. I admit they set far too heavy a crop. This must weaken the trees, and in future steps will be taken to prevent so many fruits setting. There are few fruit trees that root so near the surface as Apricots, and those who can give a good portion of the border entirely to them will be well repaid. It is surprising how soon the trees make up for loss of time. In April the fruit was quite a month later than usual owing to the protracted frost, but the weather since was most favourable, and I gathered Oullin's Early Peach in the middle of July, only a few days later than usual. The variety named is a sure cropper, and what makes it more valuable is that it is the first to ripen. Large Early is very fine this season, and where most varieties have only an average crop this is bearing very freely, the fruits large and good. There is less canker in this variety than in any other I know, and in places where Apricots do not thrive I would advise giving Large Early a trial. With me Hemskirk is less liable to canker than the Moorpark, and it is certainly a good bearer and the fruit richly flavoured. I fear I must class Moorpark as the worst as regards loss of branches, and though I still have a large tree or two, I do not know how long they will continue, the losses during the past few years having been greater with this than all others combined. Shipley or Blenheim is bearing a fair crop, and as regards ripening closely follows Large Early. The fruits are not large and its value is as a preserving kind, the fruit being juicy and good and the trees not liable to disease. Many prefer it for drying on account of its useful size and good colour. Kaisha or Syrian is likewise a small variety, and useful for the same purpose. I have others, such as Breda, which is good, but it is very small when allowed to crop freely. This is the best kind when grown in favourable situations in bush form, but for early fruit I would prefer Shipley. The same remarks apply to Frogmore Early, a small fruit, and with me inferior to Shipley. Many of the varieties are much better when gathered from the trees a few days before being used, placing them in a cool house. If we have much rain after a long season of drought and the trees are in heavy soil, it is a good plan to throw off the excessive rainfall by spare lights, boards, slates, or corrugated zinc sheeting, this preventing late fruits cracking and ripening the summer growth, the trees also being less liable to gumming and canker the following season.—G. Wythes.

—— The great scarcity of Apricots generally this season may, after all, prove a blessing in disguise; it certainly will where overcropping has been the rule. Generally speaking, Apricot trees flower so abundantly and set such numbers of fruit that gardeners are apt to think after pulling off thousands that they have over-thinned them, when really half as many more might well have been taken off. No other wall fruit is half so long-suffering as the Apricot, or capable of bearing the strain of excessive cropping; hence the abuse to which it is subjected. This season, however (the crops in most gardens being very scanty), the trees will be able to recoup themselves where weakly or exhausted, and to make strong shoots and stout buds for the coming year. The roots should be fed as often and as liberally as possible, bearing in mind that a dry root-run, even to barren trees, is far more prejudicial than a moderate crop with sufficient root moisture. Owing to there being no fruit, trees will be apt to be overlooked this year.—J. C.

BLENHEIM ORANGE APPLE.

This Apple has such a bad character of being an indifferent bearer with some cultivators, that anything that can be truthfully said that will help to disabuse the minds of those who are of the same opinion may be interesting. I write from a district—the vale of Taunton Dene—where there are probably more trees of this Apple grown than in any other part of England. Climate may perhaps have something to do with the behaviour of the trees; whether that is so or not, the healthy condition of the trees and the regularity with which they bear stamp the Blenheim as the most profitable Apple that can be cultivated when plenty of trees is grown to offer an inducement to the grower to find the best market for the fruit. I have said the trees bear regularly; by this I mean they are rarely barren of fruit, but the majority of them bear a heavy crop one year and a light one the next. Strange to say, both last year and this the majority of the trees are producing wonderful crops, some of them having as many as six or seven bags of fruit (120 lbs. to the bag); and as these will always realise 20s. per bag and sometimes 25s., my statement that it is a very profitable Apple to grow is borne out by facts. There is a prevailing opinion abroad that the trees are a long while in coming into bearing; that may be so if they are planted in a poor thin soil. The Blenheim should only be planted in ground that is naturally good and deep. If it is necessary to make the soil for them it will be sure to end in commercial failure, but given a favourable root medium and a climate such as prevails in the south or west of England, the Blenheim Orange comes into bearing as soon as any other sort of equal merit, whether the trees are in the form of standards or large spreading bushes. With regard to the latter form, I have a dozen examples in my garden, planted seven years ago, that have borne regularly ever since the third year, giving large and handsome fruit, that makes me regret the number is not twice as many.

In suitable land there is no better or more prolific sort grown that is so well adapted for regrafting fairly young trees where it is desirable to change the sorts. There is no more successful grower of the Blenheim Orange Apple than Mr. James Stevens, of South Road, Taunton. Six years ago he had a tree regrafted with this sort, and the second year after grafting, the tree produced two bags of fine fruit. Of course, there was a good number of grafts put on, so that a fine head was formed the first year. Unfortunately, in this part of the country there is more than one variety of the Blenheim, some of them inferior in size and flavour to the type. One cannot be surprised at this, seeing what a favourite the sort is and the many attempts made by amateur cultivators to raise trees from the pips. One frequent cause of failure in planting this sort in standard form is placing the trees too thick; they should stand 40 feet apart each way, and then they will form fine symmetrical heads and prove a source of pride and profit. Some claim for this sort a complete immunity from canker, but my experience and observation do not support that view. In highly manured ground I have seen it canker to such an extent as to completely spoil the trees. It certainly does not canker nearly so much as some other sorts. With me it does not canker at all, while such sorts as Cellini, Warner's King, Stubbard, and Ribston Pippin are badly affected by it. I am inclined to the opinion that rich manure applied to the roots favours the spread of canker.

Taunton. J. C. Clarke.

Profitable Raspberries.—In the case of many fruits the recently raised varieties have

size, but it is certainly at the expense of quality. This, however, cannot be said of some of the more recently introduced Raspberries. Few, I think, having any knowledge of these would care now to plant such as the old Antwerp or Fastolf even where selling the fruit is intended. Baumforth's Seedling, although not strickly speaking new, is wonderfully productive, and that too in spite of the enormous canes it makes on rich soil. Its constitution also is good, as proved by its standing the terrible frost of February in last year, when Raspberry canes were far from being well ripened, some of the older less robust growers, and which one would suppose were better ripened, succumbing. Good as Baumforth's is, I am not at all certain but that its new rival, Superlative, will in future be more largely planted. The individual fruits are so large, as to put one in mind at a distance of Vicomtesse Strawberries, and the yield is enormous. Those who intend planting Superlative and wish for good canes should order early, as for the next year or two the demand for it will assuredly be great. I have not grown Hornet myself, but hear of its value from various sources. This is being largely planted for market. Northumberland Fillbasket and Carter's Prolific are also two grand additions to the list of profitable Raspberries, and should be added to the previously named sorts where there is room. Where ground is limited it will perhaps be as well to adhere to the first three varieties. Superlative requires to be well ripened before being gathered, otherwise it does not leave the stalk so readily as some. To give these fine Raspberries justice they should not be grown huddled round stakes, but on the post-and-wire system, where every cane can get the full benefit of sun, light and air.—J. C.

GUMMING IN PEACH TREES.

I SHALL feel greatly obliged if you can tell me the cause of gumming in young Peach trees and if it can be stopped, as on regulating the wood in a young tree that has grown rather strong, I found the stem had commenced gumming just above where it is worked, and on cutting the bark, I found the under bark very sickly and in a state of decay. Cutting the bark caused the tree to bleed very badly. The variety in question is Waterloo, planted in a house with several other trees. The tree was planted two years this autumn. The house in which the tree is growing is well elevated, and the border is of a strong retentive nature.—H. LEWIS.

*** All stone fruit, that is to say, Apricots, Peaches, Nectarines, Cherries, and Plum trees, are more or less liable to be affected by the disease known as gumming. This disease is of a fungoid nature, and classed as Coryneum Beijerincki. It is decidedly infectious, but, comparatively speaking, powerless against the hard wood of a healthy, cleanly grown, perfectly sound tree. Only when wounds are caused either from bruising, neglected ties and shreds, and such like do the spores effect a lodgment in the old bark, though they are equal to penetrating the soft, young wood. In the former case gumming is followed by the loss of branches and whole limbs, and in the course of time the tree succumbs to it. When, however, the young shoots only are affected they may be cut cleanly away and burnt, the rest of the tree not suffering from the disease. It is those trees that are gross in habit—rooting, probably, in a strong, rich, imperfectly drained border—that are most liable to gumming, and in such cases partially or wholly lifting, root-pruning, replanting in fresh and less rich compost, in which lime rubbish and burn-bake are freely used, are good preventive measures. Starvation treatment also favours the spread of this much-to-be-dreaded disease. Any trees, therefore, that are established in a poor worn-out border should be lifted next autumn and replanted in a stronger and more durable compost. In all probability the tree alluded to by H. Lewis prior to being under his care had been grown rather strongly in the open ground of a nursery, and had been further rather hard pruned in order to form a many-branched, fan-shaped tree. Naturally the wood grown in the open is rarely, if ever, so hard and well ripened as that which gets the benefit of the extra heat reflected from a wall, and, according to my experience, hard pruned, immature wood is altogether unsuitable for laying the foundation of a good durable tree. Any way I have found nursery-trained trees more liable to gumming than are those procured as maidens and trained on the place either under glass or against a south wall. At first sight it may appear a somewhat drastic remedy if I advise H. Lewis to clear out his tree at once and burn every particle of it, but if saved the chances are large branches will collapse after flowering next spring, and an unsightly tree be left, while there is also a risk to be run of other trees near at hand taking the disease. The alternative (root pruning) has already been given, and in addition to this the gummed portions must be cut out where possible, dressing with painters' knotting, and also claying over the larger wounds.—W. I.

Thinning Apples.—Although the splendid rains have come in good time to help swell the immense crop of Apples we have this year, yet there is just as much need as existed before the rains for thinning the fruit. It may be difficult to do this on large standard trees, but, still, were the fruit on the lower branches removed and used or disposed of, that on the upper portions of the tree would be all the finer, and it is only fine, well-finished fruit that will find a profitable market this season. Presently, when gathering becomes very general, there will be a glut of Apples and prices will rule low. It is unfortunate that when we get such grand fruit seasons as the present there should be such flooding of the market, but in the case of such an immense crop as Apples seem everywhere to present there is no help for it, as so few care to store these fruits largely. But apart from market disposal there is to myriads the important one of home consumption, and even in this case the finest fruit affords most satisfaction. I was in a garden a few days since where Apples on stumpy bush trees were most abundant, and the gardener said that he had been thinning out the fruits almost from the moment they were large enough for use. He said also that where crops on trees had been so thinned, the proportion which fell was relatively small. Of course, the rains have checked further thinning in that direction, but the need for hand-thinning remains all the same. There is no doubt also but that when fruits have thus been well thinned, and those left have opportunities for fuller maturation, they keep so much better. Nurserymen never allow their young trees to be overloaded; hence they get such fine fruits, which keep long and well.—A. D.

TREES AND SHRUBS.

TRICUSPIDARIA HEXAPETALA.

THIS lovely flowering shrub from Chili, which is better known as Crinodendron Hookerianum, has flowered in the gardens here for several years past, and appears to be quite hardy with us. It is planted in a shady border near a large Yew hedge, and is growing in peat, leaf soil, and loam in equal proportions. It flowers twice a year, in the spring and in autumn, the colour of the flowers being a deep rich crimson. The plant the photograph was taken from is now carrying sixty flower-buds. Being near the sea we get very little frost in ordinary winters, and the Crinodendron requires no protection, but in a less favoured climate it would be well to pot it and winter it in a cool greenhouse. In the same border are growing Mitraria coccinea, Andromedas, Eugenias, Myrtles, Aralias, and a number of other things supposed to require protection. Since I sent you the list of plants killed by the frost last winter I find the following are not dead and will recover, viz., Aster argyrophyllus, Callistemon coccineus, C. spectabilis, Carpenteria californica, Ceanothus azureus, Correa viridis, Escallonia montevidensis, Eucalyptus cordata, E. piperita, and Eupatorium riparium. T. RYAN.



Tricuspidaria hexapetala. Engraved for THE GARDEN *from a photograph sent by Lord Annesley, Castlewellan, Co. Down.*

Æsculus parviflora.—This is now considered to be the true name of that beautiful shrub so long grown in gardens as Pavia macrostachya, the genus Pavia being now completely absorbed into that of Æsculus. Besides this the specific name of parviflora scarcely does it justice, for though the individual blooms are rather small, yet collectively they form a fine display, for the long spikes are closely packed with blossoms, which from their protruding stamens cause the inflorescence to acquire a Bottle-brush-like character. The flowering season being, as a rule, from the latter part of July onwards, renders it additionally valuable, for shrubs in bloom at that time are by no means numerous. It needs a spot where the soil is at all times fairly moist, and it will do well in quite stiff loam. This shrub is seen at its best when occupying an isolated position on the lawn, or in some such a spot, for suckers are pushed up in considerable numbers, so that it naturally forms a dense hemispherical mass, clothed with very dark green Horse Chestnut-like leaves, and at this time of the year

studded with spikes of whitish blossoms. A succession of flowers is, as a rule, kept up for a considerable time.—T.

Societies and Exhibitions.

ROYAL HORTICULTURAL SOCIETY.

August 13.

A most noteworthy display was again to be seen at the Drill Hall meeting of this date—remarkable not only from the splendid quality of the exhibits, but also from the excellent variety coming under the inspection of each of the committees. Hardy flowers were an important feature, Lilies on this occasion being strongly *en evidence*, these comprising not only the best of the so-called garden Lilies, but also of the newer varieties of the Water Lilies, a section which must beyond any question rapidly gain in favour judging from the blooms exhibited at this meeting. Of Dahlias, the most beautiful were to be found in the Cactus section. Gladioli were particularly good, and so were the mixed collections of hardy herbaceous flowers. A choice selection of the rarer kinds of exotic Ferns was most interesting and instructive.

Orchids, if not so numerous, were quite up to the usual standard of excellence both in hybrids and species, notably in such of the latter as are none too common, viz., Vanda cærulea, Saccolabium cœleste, and Cypripedium Stonei candidulum, whilst of the former, the Lælias and Cattleyas held the sway. Fruit was altogether excellent and comprehensive in character, from Grapes to Strawberries, the splendid quality of the Apples betokening a rich harvest later on of well-developed fruit. Of Melons, Cherries (late dessert) and Plums there were good exhibits.

Orchid Committee.

First-class certificates were awarded to the following:—

Odontoglossum Wattianum (figured in The Garden, May 3, 1890, p. 416).—A decidedly distinct and most beautiful variety, of free, vigorous growth, the one spike bearing fourteen fine flowers and buds; the lip, which is most distinct, is elongated in shape, with a large heart shaped central blotch of rosy purple and numerous spots of the same colour on a creamy white ground, the sepals being barred with pale chocolate and the petals spotted sparsely with the same colour, both on an old gold-coloured ground. From Messrs. Sander and Co., St. Albans.

Cattleya Eros (C. Walkeriana × C. Mossiæ).—A singularly fine and very distinct hybrid, in which the influence of each parent was about equal, the sepals and petals having the most pleasing soft shade of rose to be seen in the best forms of C. Mossiæ, with the flowers equal in size to those of that species. C. Walkeriana was evident in the form of the lip and the general contour of the flower, being quite expanded to the base, thus leaving the column quite open to view, the colour here being a rosy purple, darker at the extremity of the lip, with slight touches of a deep golden tint. From Messrs. Veitch and Sons, Chelsea.

Cattleya Fowleri (Cattleya Leopoldi (?) × C. Hardyana).—A very richly-coloured hybrid having the peculiar shading in the sepals and petals of the best forms of Lælia elegans, with the same shape also and growth, the lustrous sheen suffusing the magenta shade being most marked. The lip is broad and well expanded, being of a very deep purplish magenta, with an undulated margin which showed to good effect; in every respect a choice and distinct hybrid. From Mr. Gurney Fowler, South Woodford, Essex.

Vanda cærulea (Fowler's variety).—This was undoubtedly the feature of the meeting amongst Orchids, well deserving the award given to it. Either a medal or a cultural commendation might well have been given in addition. The superiority of this form was most apparent to even a casual observer; the size of the individual blooms (4¼ inches across), the robust spikes with as many as ten flowers in two instances, and the deep shade of cœrulean blue with a lighter marbling made this a most unique exhibit. The plant bore in all four spikes, the growth being most vigorous. From Mr. Gurney Fowler.

Vanda cærulea, of which a cut example was shown, a grand spike of fourteen blooms, scarcely so large as the last named, but with the petals distinctly wider, the colour in this instance being also paler, a very fine variety. From Mr. E. H. Woodall.

Cypripedium Massaianum superbum (C. superciliare × C. Rothschildianum).—An exceedingly fine hybrid and very distinct, the dorsal sepal large and well marked, as in the latter parent, the petals, on the other hand, quite broad as well as of considerable length, assuming a drooping form, and densely spotted with dark maroon spots on a light ground. The lip is elongated and of a bronzy purple tint; one plant bore three flowers to the spike. From Mr. Statter and Messrs. Sander and Co.

Dendrobium Phalænopsis hololeucum.—A lovely form of this very variable Orchid, with milky white flowers of fine shape, very distinct, the growth being apparently less vigorous. From Mr. J. F. Holmes, Bath.

Awards of merit were adjudged to the following:—

Cattleya Leopoldi (Sander's var.), which beyond any question must be classed as the finest of this fine species, the colouring, which was greatly intensified both in the ground colour and the spotting, was a notable feature, but in the case of the lip it was even more marked still, being of an intensely deep crimson-purple, the spike also a very fine one. From Messrs. Sander and Co.

Odontoglossum Harryanum (Haywood's var.), which is best described as a major form of this fine and distinct species; the colour much deeper, the sepals and petals being of a very dark chocolate with pale green veins, the lip at the same time being of greater length, the blotch of golden yellow on its centre likewise of a richer shade, a very vigorous example. From Mr. Haywood, Woodhatch Lodge, Reigate.

Maxillaria furcata.—A singularly fine and distinct species in every respect, the flowers borne well above the foliage, the colour being a most pleasing harmony of light and dark orange tints, shading off to white at the base of the sepals and petals. From Sir Trevor Lawrence.

Lælia monophylla.—Quite a miniature species, the flowers, which are produced singly, being each about 1½ inches in width and of a deep shade of orange-scarlet. This small, but pretty species was introduced from Jamaica in 1883. From Sir Trevor Lawrence.

Lælio-Cattleya Elstead Gem (Cattleya bicolor × Lælia xanthina).—A most distinct and noteworthy hybrid, having a combination of colour not yet seen in any other of its race; the sepals and petals are of a clear golden yellow as in the last-named parent, being about 3½ inches across, the lip being of a clouded purple tint, a marked contrast to the other parts of the flower. From Mr. Ingram, Elstead House, Godalming.

Botanical certificates were awarded to Eria stellata, a very pleasing variety with star-like flowers of a rosy shade, the spikes being of considerable length and densely packed. From Admiral Cator. Polycynis Lehmanni, a beautifully marked species with small graceful flowers, not unlike P. lepida; Polystachya odorata, with small greenish yellow blossoms in dense spikes, and Dendrobium longicornum, with rather large white flowers, the lip marked with lines of orange-yellow. All from Sir T. Lawrence.

Mr. Haywood, Woodhatch Lodge, Reigate (gardener, Mr. Salter), had a splendid group of Odontoglossum Harryanum, consisting of forty plants, all in the most luxuriant health, bearing unusually fine spikes and comprising several superior forms, one of which has been already noticed; some of these plants bore spikes with as many as eight flowers to each, the colour in every instance being excellent. A finer lot of this very distinct Odontoglot has never been staged at any previous meeting, whilst the tasteful mode of grouping was most commendable. With these were a few good plants of O. vexillarium, the whole being set up with Maiden-hair Ferns and light Palms (silver Flora medal). Another of these unique exhibits of cut Orchids came from Baron Schrœder's collection (gardener, Mr. Ballantine). The varieties were of the very finest description, whilst the cultural condition was quite equal. Of Aerides Lawrenceanum Sanderianum there was a grand spike, bearing very large flowers (this is one of the finest Aerides in cultivation); A. nobile was also shown; this is a glorified A. odoratum. Sobralia Lowi, with deep purplish mauve flowers, a very distinct species, and Mormodes luxatum, an immense spike densely covered with its singular creamy white flowers of wax-like substance, were shown, each in fine character. Of Vandas there were lovely examples of V. insignis (true), its lustrous brown sepals and petals and expanded rosy lilac lip, rendering it quite distinct from V. tricolor, with which it was at one time confounded. V. tricolor in one of its finest forms with dark sepals and petals was also shown, and so was a charming example of V. Roxburghi, a species at one time quite common, but now very rarely seen. Odontoglossums were represented by a very large and much-branched spike of O. ramosissimum and of singular purity. Of Saccolabiums there were S. Blumei majus, a long dense spike, and S. cœleste, of singular beauty, the rich deep hue of the lip being unusually fine. Cypripedium Stonei platytænium was represented by one cut spike bearing three grand blooms, deep in colour, and of Cattleyas there was a splendid example of C. Hardyana (Clark's var.), which has more of the orange colouring upon the lip, surrounded by the richest crimson-purple. The only plant shown was one of Cattleya Kienastiana, the variety a very superior one (silver Banksian medal).

From Sir Trevor Lawrence, Burford Lodge (gardener, Mr. White), came another of his characteristic exhibits, consisting chiefly of species quite out of the common. Two of the most noteworthy on this occasion were those to which awards of merit were given; others comprised Calanthe natalensis, a pale sky-blue variety somewhat after C. masuca. Vanda Hookeri, a truly handsome and distinct species of the Rush-leaved section, was also shown, the flowers very large, with much of the colouring of Dendrobium McCarthiæ, a deep rosy lilac on a lighter ground. Miltonia Schrœderiana, a distinct-looking species, was also included, also two very fine spikes of Phalænopsis Esmeralda, the one representing the type, having rose-coloured flowers, the other being white, save a very light flush of the same tint. Aerides Lawrenceanum Sanderianum was also shown here in equally fine condition. A very singular species of Oncidium was present in O. spilopterum, very distinct, with a prominent yellow lip. The choice old hybrid Lælio-Cattleya exoniensis was also shown well, and a hybrid Cypripedium of much promise was asked to be shown again. Of Vanda cœrulea there was here staged an immense mass bearing no less than eighteen spikes, producing a fine effect, a cultural commendation being specially awarded, and a silver Banksian medal to the group. Another most noteworthy group was staged from the collection of Mr. Gurney Fowler, South Woodford, Essex (gardener, Mr. Davis); this comprised a fine hybrid Cattleya already noted and the grand example of Vanda cœrulea, besides which there were Lælia elegans, a very fine spike with ten richly coloured flowers; Catasetum Bungerothi, an extra fine example of this singular Orchid; Cattleya crispa with the purest of white sepals and petals; C. Hardyana of deep colour, C. Schofieldiana, Zygopetalum rostratum, as well as Cypripedium superbiens (Demidoff's var.), a paler form than the type (silver Banksian medal).

From Messrs. Sander and Co. came a very showy group of choice kinds, which comprised a finely-flowered lot of Dendrobium Phalænopsis Schrœ-

derianum, some of which had the imported bulbs of unusual length; one of these bore a spike of remarkable length. Odontoglossum vexillarium rubescens, rich rose colour, very distinct, and Masdevallia Veitchi grandiflora were both excellent; so also was a grand form of Cattleya aurea, the lip being specially rich in its tint. C. Kienastiana was also good here, and so was that very distinct Cattleya Prince of Wales, which has the form of C. intermedia, with the sepals and petals of the softest blush and the lip pale crimson-purple, a lovely variety. C. Gaskelliana and C. Leopoldi were both shown, including a very fine form of the latter, already noted, as well as a fine new hybrid Slipper, C. Massaianum superbum. C. Ida Brandt (another seedling) was shown well. Odontoglossum bictonense album, with the lip of pure white; and Calanthe Laucheana, with pale purplish flowers, quite distinct; also Miltonia Clowesi were all to be seen here, so also were Catasetum fimbriatum, a pale, but beautiful species, and Lælia elegans prasiata, with pale sepals and petals, the lip on the other hand being of a deep purplish crimson, thus affording a marked contrast. Cirrhopetalum picturatum was also shown (silver Banksian medal). Other exhibits comprised a small group from Messrs. Low and Co., which included Saccolabium cœleste, three plants being shown, one of which was a superior variety with a darker lip and finer spikes; Cattleya Wallisi, with pure sepals and petals, the former pointed and narrow, the latter broad and obtuse, and the lip with a rich orange blotch—a very fine white Cattleya. Cypripedium Charlesworthi and C. Parishi were both shown here. From Messrs. B. S. Williams and Son came a group of Cypripediums, which included of the choicer hybrids, C. Morganiæ, C. œnanthum, C. G. H. Rogers, C. Harrisianum superbum and C. Ashburtonæ expansum, each in good character, also C. tonsum, a singularly beautiful species and a fine variety. From Mr. Lutwyche, Beckenham, came cut spikes of Odontoglossum crispum and O. Pescatorei, both being very good, considering the lateness of the season. Cypripedium Godefroyæ, a near relative of C. bellatulum was shown here in two distinct forms, as well as a well flowered plant of Promenæa stapelioides. Mr. Hardy on this occasion sent from Tyntesfield a distinct form of Cattleya crispa, with blush sepals and petals, and the lip marked with deep lilac; C. Brymeriana came from the same source. Messrs. Heath and Sons, Cheltenham, had a small group of Dendrobium Phalænopsis Schrœderianum showing a wide range of colour, the growth being dwarf; Cypripedium pendulum, with long drooping petals, and a form of C. Fairrieianum came from the same firm. Mr. Ingram had, besides the certificated Cattleya, a hybrid Cypripedium—C. album (C. leucochilum × C. Schlimi)—which is of a pearly white colour with age, being the nearest approach to a pure white yet seen. From the Botanic Gardens, Glasnevin, was sent a bloom of Cattleya granulosa grandiflora, its size its distinctive feature.

Floral Committee.

First class certificates were granted to the following:—

Anthurium Mariæ.—This variety is characterised by a robust and dwarf habit. It has large handsome leaves and a fine pure white spathe which contrasts well with the red spadix. It was raised at Burford Lodge and shown by Mr. Bain, gardener to Sir Trevor Lawrence.

Brunsvigia Josephinæ.—This is a Cape bulbous plant, the plant shown having an erect scape terminated by a large spreading head of deep crimson flowers. It came from Mr. Low, gardener to Earl Brownlow, Berkhamsted.

Awards of merit were granted to the following:—

Chrysanthemum Princess May.—This is a very fine form of the well-known annual Chrysanthemum or Crown Daisy of gardens. Its flowers are very large and broad in the petal, white, with a sulphur-yellow zone at the base of the petals and having a rich yellow disc. From Mr. H. Brownhill, Sale, Cheshire.

Chrysanthemum elegans.—Another charming variety, but rather too much like the preceding one, being chiefly distinguished by its bronzy-yellow disc. Also from Mr. Brownhill.

Chrysanthemum Sunshine.—This has flowers of a deep rich yellow colour, the petals broad and overlapping, and the flower almost circular in form. From Mr. Brownhill.

Chrysanthemum Chieftain.—This also is of a rich yellow colour, but the disc or centre is distinct, of a dark purple hue. From Mr. Brownhill.

Dendrocalamus membranaceus.—A Burmese Bamboo, with distinct merits, like an Arundinaria in habit. Its leaves are of a light green colour, each about 6 inches long and 1 inch broad, with a pronounced ring of hairs at the base of each. It was shown by Mr. A. B. Freeman-Mitford, of Batsford Park, Moreton-in-Marsh.

Dahlia Arthur Cheal.—A Cactus-flowered variety of the best form, and of a rich glowing crimson colour. It was shown by Messrs. J. Cheal and Sons, Crawley.

Dahlia Mrs. A. Beck.—This also belongs to the Cactus section, its petals extra narrow and pointed, the colour a soft shade of orange-scarlet. From Mr. T. S. Ware, Tottenham.

Gladiolus Duke of Devonshire.—This is a beautiful variety, with flowers of a light scarlet colour, suffused with white in the throat. Shown by Messrs. J. Kelway and Sons, Langport.

Gladiolus Earl Cadogan.—A noble variety, with immense flowers that are practically self-coloured, being of a clear cerise-red hue. We should like to see more of such as this in preference to the splashed and feathered vari-coloured varieties, of which there are too many. From Messrs. Kelway.

Gladiolus Don José.—This is a most distinct break away in colour, and there is nothing at all like it. Its flowers are of a deep rich purple tint, very striking in contrast with that of other kinds. This also came from Messrs. Kelway.

Gladiolus Mrs. H. Beecher.—This is one of the G. Childsi hybrids and a very fine variety with rich crimson flowers, which are shaded and spotted with white in the throat. It was shown by Mr. Bain, gardener to Sir Trevor Lawrence.

Montbretia Soleil Couchant.—A lovely yellow variety as rich in colour as the name would imply. This was also shown by Mr. Bain.

Sorbus Aucuparia fructu luteo.—This, judging from the well-berried clusters shown, is a counterpart of the Mountain Ash except in the colour of its bold clusters of berries, which are of a deep yellow tint. It was shown by Messrs. G. Bunyard & Co., Maidstone.

Tigridia grandiflora immaculata.—A lovely form of the gorgeous Tiger Flower, its large blossoms being pure white, the edges of the inner segments margined with a creamy tint, but free from the spots and showy markings that characterise most Tiger Flowers. Shown by Messrs. R. Wallace and Co., of Colchester.

Tigridia grandiflora aurea.—The flowers of this striking variety are deep orange-yellow, the base and lower half of the flower profusely blotched with crimson. From Messrs. R. Wallace and Co.

Among the trade groups one of the most noteworthy and certainly the most graceful was a grand group of Ferns from Mr. H. B. May, of Edmonton, comprising all the choicest varieties, arranged in his usual charming way and well deserving the silver-gilt Flora medal awarded. Pterises were well represented by large plants of the new P. cretica Wimsetti and many other varieties, P. serrulata in many forms, and P. tremula elegans, having long tasselled fronds. Among Aspleniums the following were noted: A. caudatum, which has long drooping fronds more than a yard in length; A. lucidum, with large pinnules of a polished green; A. Baptisti and A. dissectum. Adiantums were present in great variety, also Davallias, Gymnogrammas, and little gems such as the Cheilanthes and Nothochlænas. At the back of the group were remarkably well-grown specimens of a large size of the following: Doryopteris, Lomarias, Platyceriums, Acrostichum aureum, Microlepia hirta cristata, Nephrolepis in variety, and Polypodium iridoides. A charming display of cut flowers was made by Mr. Bain, gardener to Sir Trevor Lawrence, who showed Gladioli in fine variety, including many of the handsome G. Childsi and G. Lemoinei hybrids, and several of M. Lemoine's new and beautiful Montbretias. A silver Flora medal was awarded this group. Messrs. Kelway and Sons received a silver-gilt Banksian medal for one of their noble displays of Gladioli, containing many fine kinds, amongst which besides those previously mentioned we noted C. T. Ritchie, brilliant scarlet with white throat; Col. Welby, rich salmon; R. Morrow, light rose; and Lord George Hamilton, cerise-red, shaded with crimson. Gaillardias, the Japanese Wineberry (Rubus phœnicolasius) in fruit, and Dahlia Duke of York, a single crimson variety with fringed petals, were also well shown in quantity. Messrs. Wallace, of Colchester, were again well represented by Lilies in season, especially good being L. auratum platyphyllum virginale, L. Henryi and L. Lowi, the new and beautiful Burmese Lily. The large-flowered Gladioli were well shown in some of the best kinds, and Tigridias in the front of this group were strikingly attractive. A silver Banksian medal was awarded. A similar award was granted to Mr. T. S. Ware for a large group of hardy flowers in season, such as Lilies, Phloxes and Veronicas, with single and pompon Dahlias. Messrs. Barr and Son had a fine group of hardy flowers, in which were well-grown Phloxes, whilst Lilium tigrinum splendens and L. tigrinum Fortunei (the double-flowered Tiger Lily) were prominent features in the group. A bronze Banksian medal was granted. Mr. W. Robinson received a similar award for Nymphæa Marliacea albida and N. M. carnea, grand flowers of both these noble varieties being shown, and they attracted much notice.

Messrs. J. Laing and Sons, of Forest Hill, showed a fine group of Crotons, young plants in variety, of good colour, and of a useful decorative size. A silver Banksian medal was awarded. Dahlias in quantity made their first appearance this season, Mr. J. Walker, of Thame, receiving a silver Banksian medal for a large exhibit of show, Cactus and decorative varieties. Mr. Mortimer, of Farnham, showed Cactus Dahlias largely, and was awarded a bronze Banksian medal, whilst Messrs. J. Cheal and Sons, of Crawley, had a group of the best kinds, including several new ones of promise, that will doubtless be seen again before the season is past. A group of Bamboos and Lilies which go well together came from Mr. McArthur, of Maida Vale, who received a silver Banksian medal. Messrs. B. S. Williams and Son showed plants of Ixora Duffi carrying large trusses of bloom, and Mr. Douglas showed a yellow self Carnation named Britannia. Sweet Pea Cupid was again shown, and from Messrs. J. Veitch and Sons, Chelsea, came an interesting hybrid Begonia named acerifolia, on account of its pointed leaf lobes, which in some degree resemble those of a Maple leaf. They are of a dark olive-green, with light green veins and mottled with silvery white. The Crown Daisies from Mr. Brownhill, of Sale, were a charming feature of the meeting, as he showed them in large quantity, whilst their merit may be gauged by the fact that four out of the seven varieties received an award of merit. Mr. Witty showed a group of pot plants of a Fuschia named Pride of South London. It has prettily variegated leaves and a single purple and red flower. Mrs. Tudway, The Cedars, Wells, sent plants and cut flowers of a sweet-scented Carnation named Mrs. Tudway, but it is a poor kind quite unworthy of a name. Lobelia cardinalis Crawfordensis, shown by Mr. Slogrove, Gatton Gardens, Reigate, is a travesty on the brilliant Cardinal Flower, as we do not want a white blotched form like this. Mr. Burt, Caen Wood Towers, Highgate, sent a red striped form of Lilium auratum, which, however, does not materially differ from that known as L. a. rubro-

vittatum. An erect growing variety of Lawson's Cypress, a purple-leaved Spurge Laurel and Asparagus Sprengeri, a distinct variety, were shown by Messrs. T. Cripps and Sons, of Tunbridge Wells.

Fruit Committee.

The exhibits before this committee were numerous, the fruit staged being of excellent quality. There were several new seedling Apples and Grapes.

First-class certificates were given to—

Cherry Geant de Hedelfingen.—A very black large fruit somewhat after Black Tartarian, but later, with firm flesh of delicious flavour. From Messrs. Rivers and Son, Sawbridgeworth.

Plum Rivers' Early Favourite.—This was recently noticed by the committee at Chiswick bearing a very heavy crop. It was sent out by Messrs. Rivers many years ago, having been raised at Sawbridgeworth. The fruits are more oval than those of Early Prolific and very sweet and juicy. It is a freestone and of medium size.

The following Lettuces, after trial at Chiswick, received awards of merit :—

Romaine Grise Monachere.—A very fine type of Cos, leaves deep green, heart firm, and of good flavour. From Messrs. Benary, Erfurt.

Romaine Ballon Cos.—A very large variety, and similar to Veitch's Superb White Cos. This variety is remarkable for its sweet flavour and immense size. Messrs. Benary.

Lettuce Satisfaction.—A Cabbage variety of medium size with compact heart; a good summer Lettuce. Messrs. Benary.

Lettuce Grosse Brune tetue.—A copper-coloured variety noted for its firm heart, good flavour and good qualities in poor soils. From Messrs. Vilmorin.

Lettuce Merveille des quatre Saisons.—Almost identical in colour with the last, but larger and of excellent quality, the leaves being more fringed. Messrs. Vilmorin.

Lettuce Royal Malta.—A large pale green variety, much curled, similar to the old Malta type, but more compact. Messrs. Harrison and Sons, Leicester.

Lettuce Iceleaf.—A new curled type somewhat like Drumhead, but more compact, the edges of the leaves fringed, heart firm and compact, a good summer variety. From Messrs. Veitch and Sons, Chelsea.

Butter Bean Golden Beurre Dore naine.—A fine variety of this section, very free-bearing. Messrs. Vilmorin.

French Bean Longfellow. — An excellent type, an immense cropper, pods long, with very little stalk, and of good flavour. Messrs. Henderson, New York.

French Bean King of the Greens.—A very dwarf grower, very green, roundish pods of good flavour, a free cropper and a very early variety. Messrs. Vilmorin.

French Bean Dwarf Early Mangetout.—This has long, slender pods of good quality. Messrs. Vilmorin.

Butter Bean Flageolet Roi des Verts.—A yellow kind of very fine quality, good cropper, pods large and handsome. Messrs. Vilmorin.

Melon Hero of Middlesex. — A seedling between Hero of Isleworth and Syon House; flesh green, of excellent quality and great depth, flavour rich. The fruit is roundish and densely netted. From Mr. G. Wythes, Syon House, Brentford.

Apple White Transparent.—The fruits are above medium size and have a firm flesh, which is of a brisk acid flavour. From Messrs. Bunyard, Maidstone.

Strawberry (alpine) Rouge Ameliore. — Much larger than the usual alpine, long oval fruits, of rich crimson colour, delicious flavour and freely produced. From Mr. Hudson, Gunnersbury House, Acton.

Messrs. Veitch, Chelsea, staged a very good collection of Apples, Pears, Plums and Cherries, with a few late Raspberries. Beauty of Bath, Duke of Orleans, Early Strawberry, Red Astrachan (finely coloured), and Peter the Great Apples were very fine. The best Plums were Hunt's Early Prolific, Gisborne's, Early Transparent Gage Early Orleans and The Czar (silver Knightian medal). Messrs. Bunyard, Maidstone, had three dozen dishes of remarkably fine Apples, large, well coloured and of good quality, the dishes of Williams' Favourite, Cardinal, Beauty of Bath, Lady Sudeley, Irish Peach, Kerry Pippin, The Vicar, Mr. Gladstone, Sugar Loaf, a very handsome fruit, The Queen and Duchess of Oldenburg being noteworthy (silver Knightian medal). Messrs. Rivers, Sawbridgeworth, had a notable collection consisting of Cherries, Plums, Apples and Pears. Among the Cherries, Emperor Francis, Bigarreau Noir de Guben and Monstreuse de Mesel were very fine. Plums, both from under glass and open air, were remarkable for size and colour. Beacon and Beurré Gifford among the Pears, and Early Rivers, Keswick, Duchess of Oldenburg, Early Julien, and Early Harvester among the Apples were good (silver Knightian medal). Mr. Empson, Ampthill House, staged a collection of fruit, consisting of Muscat of Alexandria, Black Hamburgh and Madresfield Court Grapes, several bunches of a new Grape, a seedling from Madresfield Court and Gros Colman, Apricots, Peaches, Plums, Apples, and Pears (silver Banksian medal). From the society's gardens came an excellent collection of Plums, the varieties most noticeable being Heron, Late Prolific, Reine Claude de Comte, Early Transparent Gage, McLaughlin's Gage, Golden Esperione, Bittern, Curlew, and Sultan. Mr. Taylor, Oatlands Park Gardens, Weybridge, received a cultural award for a very fine lot of well-coloured Princess of Wales Peaches. Mr. Maher, Yattenden Court, Newbury, sent a new white-fleshed Peach named Epicure, but over-ripe. Messrs. Laxton, Bedford, and Mr. Cleaver, Leamington, sent seedling Apples. Mr. Webster, Beckenham, sent very fine bunches of La Versaillaise Currant and growths of Raspberries fruiting on the new wood of this season. Mr. Hudson sent two Melons, Sutton's Scarlet and Sutton's Scarlet Hero of Lockinge. Mr. J. Barker, Highgate, had a dwarf Broad Bean, and boxes of Plums packed for market came from Mr. J. W. Ayton, Hereford, to show packing. Messrs. Veitch and Sons staged a fine lot of their new Giant White Cos Lettuce grown in pots. This was considered to be identical with Ballon referred to above.

The lecture on hardy Bamboos was given by Mr. A. B. Freeman-Mitford, who has planted in his garden a complete collection of all the known hardy kinds. He remarked that after a winter of great severity, which had absolutely killed large numbers of reputed hardy trees and shrubs, he was able to report that not one Bamboo in his large collection had perished. Some had been cut down to the ground, but even these had already sent up fresh culms. He regarded hardy Bamboos as a new source or element of exceeding grace and beauty, and pronounced them capable of withstanding the severest cold of our average midland climate. In their native land the season of Bamboo growth was a time of great heat, accompanied by an abundant rainfall, and in proportion as these conditions obtained in our country the more favourable they were to their growth. Early growth, so as to allow ample time for ripening, was the thing to encourage, as the plants needed ripening underground as well as above. In proof of this mention was made of Phyllostachys mitis, which always sends up its new culms near to the old ones, the reason for which was not that the rhizomes did not travel like those of other kinds, but because they were imperfectly ripened and consequently died back considerably. It was a great mistake to try and adapt Bamboo planting to the usual planting season in gardens when growth was dormant, and the evils of this course were even yet manifest in the present state of the first lot of plants he planted which came late in autumn and were at once put out in their permanent positions. The right course to pursue with plants received at this period is to soak the roots for twelve hours, placing the plants in a cool house for the winter, giving little water at the root, but using the syringe freely upon the leaves, and then, although they might shed most of their leaves, others would appear in March and not a plant would be lost. By the middle of May hardening off might begin, and in June the plants should be planted in the permanent positions. When planting, there should be no trampling of the soil to make the plants firm, as great damage might be done to the underground stems. Abundance of water would settle them firmly. He passed briefly in review and mentioned the chief characteristics of all the forty-two kinds growing with him, suggesting that some of the dwarf sorts might become admirable covert and carpet plants in our woodlands, just as they absolutely monopolise enormous areas of woodland in Japan. It has been suggested, and he thought truly, that the reason why so many Japanese plants were of a climbing habit was that this form of growth became a necessity of their existence, otherwise they would be exterminated in the wide-spreading thickets of these dwarf Bamboos. The taller kinds were garden plants of the highest beauty if planted in suitable situations and associations, a background of Holly being the best to show up their graceful charms. Having regard to the growing popularity of these plants, it was most desirable that we should all endeavour to clear up the confusion that still existed as to the nomenclature of the few kinds obtainable in this country, and further that nurserymen should add to their now very limited collections, as at present few indeed of the sorts enumerated were obtainable in our country.

MR. A. F. BARRON.

We hear much of dissatisfaction at the recent action of the Royal Horticultural Society as regards what appears to amount to a dismissal of their excellent superintendent, Mr. Barron, who for about forty years has been connected with their gardens, and for the last thirty years has had their entire care, and for many years the management of the R.H.S. shows, and who of all connected with the society has best deserved the confidence of all interested in the society and its work.

The facts of the case are imperfectly known to us, but we hope that nothing done by such an honourable society requires to be done in the dark. The facts should be published so that the Fellows may judge of the wisdom of the course that has been pursued. There is a garden committee, and it has leaked out that instead of consulting with them, as should have been done, the council went outside that body, and employed gardeners from private places to report, or at least sign a report, as to the state of Chiswick Gardens, which are maintained for quite different objects to those of private gardens. This was an extraordinary proceeding, and the more so as it was done without the knowledge of the garden committee. We hope some members of the council will tell us the facts in full about the matter. It would not be possible in England to get a man of such experience in the work of the society as Mr. Barron, and with so many good qualities for the post of superintendent of their gardens. To send gardeners from private places to report on the work in a purely experimental garden shorn of its means and even space of recent years was surely a most unwise proceeding.

Is what has occurred really the work of the council, or of someone who makes a tool of it for his own ends ?

—— Mr. Barron's retirement has come to all true gardeners as a surprise. Those of us who have visited Chiswick for business or pleasure could not fail to find the latter, as well as unlimited instruction, in the presence of Mr. A. F. Barron.

He was equally at home among fruit of all sorts, out-of-door and under-glass hardy trees and shrubs, flowers and vegetables, and since the renaissance of Chiswick—which may be said to have originated with the life-work of Mr. Barron—it has been impossible to visit the gardens at any time or season without finding hosts of representative plants, flowers and fruits of absorbing interest.

Chiswick, with all its financial and other difficulties, is still the only representative we have of a great national school of horticulture in which something like justice has been done to the culture of fruit and vegetables as well as hardy herbaceous plants and flowers. None who know Mr. Barron—and nearly all gardeners know him—but will reciprocate all the kind words and wishes so ably and well expressed in last week's GARDEN by F. W. Burbidge on page 112. While feeling it a personal pleasure and privilege to wish the retiring superintendent godspeed and a happy and quiet period of comparative rest after so long and honourable a career, and ready to contribute to a testimonial for what the poet craved, "a small house and a large garden," or otherwise, a good many of us marvel greatly at Mr. Barron's retirement in the prime of life and the maturity of his knowledge. For a great many years the wisdom of Mr. Barron, as the administrator of a most difficult trust, was unequalled by his skill as a cultivator, and I say fearlessly, with Mr. Burbidge, that no one alive to-day possesses such a full and accurate knowledge of hardy garden fruits and fruit trees as does the subject of this notice, and so far, even if no further, his retirement from Chiswick will be a loss. Great secrecy has perhaps properly been maintained as to the cause of it. It appears as if the council had taken the initiative in the matter, and if not, of course they could have refused to accept the resignation. To smoothe the matter over with a pension does not satisfy the public, nor serve the highest interests of the society. Possibly enough Mr. Barron desires the rest that he has so well and honourably earned, but he is still in the prime of life and in the mellow strength of his matured manhood and ripened experience, and as capable as he ever was of rendering the most unique and distinguished services to the society that he has so long and honourably served.—D. T. FISH.

NOTES OF THE WEEK.

Polypodium iridoides is a distinct and handsome Fern, of which a good plant was shown in Mr. May's group at the Drill Hall on Tuesday. Its fronds, as the name suggests, resemble the leaves of a Flag Iris. They are entire, stand erect to a height of 3 feet or more, taper to a point, and are of a deep rich green colour.

Carnations from Kelso.—Messrs. Laing and Mather send us from Kelso a gathering of beautiful self Carnations which they grow so well. Among them Dundas Scarlet, a brilliant red, is very fine. Crombie's Pink, Duchess of Fife, William Wood, and the old Mary Morris are all worthy of note, the colours clear and very distinct.

Setaria alopecuroides nigra.—This striking and distinct annual Grass not often seen was represented by a large bunch in Sir Trevor Lawrence's group at the Drill Hall on Tuesday. It has strong stems, which grow about 2 feet high, clothed with large leaves, each about 8 inches long and 1 inch wide, and terminated by a thick drooping plume made up of myriads of flowers. It is a fine Grass for winter decoration when dried.

Agapanthus Mooreanus appears to me to be far too little known. Here it is undoubtedly quite a hardy plant; frost that kills down to the ground such things as Laurels, Laurustinus, &c., has no effect at all upon it, though wholly unprotected, and, more than that, it is very free flowering, the smallest bits producing one or more scapes. There are here literally hundreds in all sizes and every one flowering. For the sake of a bit of blue in the garden it should be generally introduced; it is a first class hardy plant.—T. SMITH, *Newry*.

Lilium Henryi is just coming into flower at Kew, and although as yet comparatively new, there is every indication that it will be one of the garden Lilies of the future. It has been aptly called an orange-yellow L. speciosum, but it is besides endowed with great vigour and stature. Some of the strongest growths are between 7 feet and 8 feet in height and have from twenty to thirty flowers and buds upon them. It is a grand and stately Lily and distinct from all others. A coloured plate of it was given in THE GARDEN of November 7, 1891.

Brunsvigia Josephinæ is one of a showy family of Cape bulbs that require to be grown in a greenhouse, but are rarely seen in this country. The bulb of the plant shown at the R.H.S. meeting on Tuesday was very large and bore two scapes, the larger one being of great size, terminated by an enormous head of flowers concentrated in an umbel. Each flower, however, is borne on a stem 9 inches in length, and the flowers radiate in all directions. They are of a deep blood-crimson colour. The leaves, which appear after the flowering season, are long, strap-shaped, and of a glaucous green.

Chrysanthemum Walter Surman.—An excellent coloured illustration of this Japanese incurved Chrysanthemum is given in the current number of the *Revue Horticole* of Paris. It is there called Walter Seaman, which is an error, for the variety was raised in America by a very successful seedling grower, Mr. Henry B. Surman, gardener to Mr. E. W. Clarke, of Philadelphia. Among other well-known novelties from this grower are Mrs. E. W. Clarke, Edwin Lonsdale, R. C. Kingston, Mrs. L. C. Madeira, Master Bates Spaulding, Welton Beauty, and Mrs. R. C. Kingston, the last named an incurved being certificated by the N.C.S. on December 4, 1894.—CHRYSANTH.

Crown Daisies.—It was a great pleasure to see the familiar old Crown Daisy of our gardens presented in such magnificent form as it was on Tuesday at the Drill Hall by Mr. H. Brownhill, of Sale, Cheshire. As will be seen by our report of the meeting, four varieties were selected for a distinct award, but apart from this the merit of the exhibit as a whole was great and the quality of the flowers much in advance of what has been hitherto seen. It is perhaps needless to multiply names in a race of annual flowers, but if we take them as a strain, it is one that should become popular in gardens provided the plants have good culture, such as Mr. Brownhill gives them in rows several feet apart. For late summer and autumn there could be no finer flowers than these to make the garden gay and fill the flower vases in the house as well.

Lilium Lowi.—Among the Lilies recently introduced from Burmah is this beautiful and distinct kind, which was well shown by Messrs. Wallace, of Colchester, at the Drill Hall on Tuesday. Some time back when visiting this nursery we saw a batch of Lilium Lowi that showed much variation in habit of growth, and as the bulbs were newly introduced it was thought possibly there were other species as well. They all proved, however, to be L. Lowi, and it is evidently subject to an amount of variation both in growth and in the amount of external colouring that suffuses the white ground colour of the flower. It belongs to the drooping tube-flowered group, and although as yet only about two blooms have appeared on a stem, there will possibly be more as the bulbs become established. The spots and markings in the tube of the flower are very rich and pretty. A coloured plate of this Lily was given in THE GARDEN of March 17, 1894.

Geranium sylvaticum.—Few things among hardy herbaceous plants are equal to Geranium sylvaticum for producing effect, and yet this plant appears to be rare, even although a strong grower, as it is seldom met with—in fact, I only know two places where it is grown, viz., Baldersby Park, Thirsk, and Kirkham Abbey, York. At the latter place hardy plants are made a speciality of, and recently I saw among them two fine clumps of this Geranium, each 4 feet in height and as much in diameter, and a complete mass of flowers. The colour of the flowers, looked at in a mass, is a bluish purple, but on closer inspection it is seen that the petals are shaded with scarlet-purple towards their base. Besides being an excellent subject for the hardy herbaceous border, seeing that it not only produces an enormous quantity of blossom, but continues in beauty for six weeks or two months, it is also useful in a cut state for home decoration.—R. C. H.

Snapdragons from Hawick.—I was pleased to notice your correspondent's remarks about the white Antirrhinum in your last issue, as there is no plant better adapted for the flower garden, and when it is seen in masses with its two companions of exactly similar habit—the crimson and the yellow—it leaves nothing to be desired. I do not consider it a good plan to raise them from seed, as although you may get a percentage true, the result will be disappointing, and it is much better to raise them from cuttings in the autumn. I enclose a few spikes of each of the varieties.—J. FORBES.

*** The flowers sent are good and of simple colours, but it would be better not to seek novelty through dwarfing such plants, as the free and more natural growth is much better.—ED.

Pæonia triternata.—By this post I send you a couple of spikes of Pæonia triternata culled in the nurseries of Messrs. Veitch, Exeter. Though introduced a long time ago the plant is not often seen in English gardens. It grows about 18 inches high and has the double merit of being effective in spring as well as in autumn. The single rosy crimson flowers appear about May. But almost more effective than the flowers are the showy seed-pods, of which the enclosed is a sample. The pods are larger than those of most Pæonies, and though they open as soon as the seeds begin to ripen, the latter adhere for many weeks and are highly ornamental. Each pod contains from six to ten blue-black seeds the size of an ordinary pea and perhaps double that number of sterile ovules of a deep scarlet. The contrast of colour is very striking and lasts for a long time.—F. W. M.

Flowers from Winchmore Hill.—I am sending you a plant of Linaria repens alba to show how free-blooming it is. It has been in bloom since May. I am also sending you flowers of the white Dandelion. Hedysarum multijugum is still in full flower. Haplocarpha Leichtlini has stood the past winter well, and so has Cineraria aurantiaca, both remarkable plants for a winter like the past. Geum Heldreichi is also in full bloom, and is a favourite with everyone. Geum Eweni and G. montanum maximum are almost over. Geranium sanguineum album has also been flowering well. Delphinium grandiflorum plenum is beautifully in flower. How seldom this plant is seen, and yet at one time one of the commonest. One of the most effective masses I have is Linaria dalmatica; it is a sheet of bloom 18 inches high, the first shoots were 4 feet; this, like many other perennials, should be cut down when flowering is finished, and so ensure a succession. Aquilegia glandulosa and Stuarti have been flowering well, but many fail with them, which I think is owing to removing them at the wrong time; they should never be removed when dormant, but always when in full growth. Helenium grandicephalum is very good just now; a fine plant for a large border.—AMOS PERRY.

Names of plants.—*J. W.*—1, Spiræa ariæfolia; 2, Spiræa Bumalda; 3, Ilex Shepherdi.——*W. H. Smith.*—1, Phytolacca decandra.——*P. H. Breton.*—1, Eucalyptus Gunni; 2, Paliurus sp.——*Miss E. Breton.*—1, Abelia rupestris; 2, Tellima parviflora; 3, Cassia floribunda; 4, Calystegia pubescens fl.-pl.

Names of fruit.—*W. H. Smith.*—2, Apple White Juneating.

No. 1240. SATURDAY, August 24, 1895. V I. XLVIII.

"This is an Art
Which does mend Nature; change it rather; but
The Art itself is Nature."—*Shakespeare.*

CHRYSANTHEMUMS.

CHRYSANTHEMUMS IN RUSSIA.

Though a beginner in Chrysanthemum growing, I nevertheless have had time to try all the different modes of training practised in England. I have grown (1) standards, naturally grown I should like to call them; (2) for getting big flowers I employed the English system, that is growing on the plants without stopping, finally taking up three or four of the best shoots after the first break; (3) cut-down plants; (4) bushes; and (5) plants with single blooms from summer cuttings.

First I should like to direct attention to the cut-down plants, in which I have always taken a great interest, being rather anxious to get good blooms upon dwarf plants. I must confess this method has not satisfied me, though I venture to say the plants have been well grown and clothed with dark foliage right down to the rim of the pots. The old Avalanche, for instance, grown upon this principle reached a height of no more than 24 inches to 28 inches; each plant had three or four shoots left with the same number of buds. So far I was very pleased, but when the flowering time came only one or two blooms opened, the others were blind. What is the reason of this? It was not one plant; there were about fifteen, all of which behaved alike. Avalanche grown without stopping developed beautiful blooms, three or four on each plant. This bad behaviour of Avalanche has happened with me two years in succession. There are other kinds which do the same—for instance, Bouquet des Dames, Puritan, and Edouard Audiguier. Of the last named kind I can get good flowers only from the single bloomed plants grown from summer cuttings. All the later kinds are cut down about June 1, and the earlier ones about June 15. I imagine that our cold climate has much to do with this strange behaviour. It is almost impossible to strike cuttings before February 1, and even if you have the chance of securing good cuttings before this time it is not worth while to strike them before the date named, because the cuttings inserted between February 1 and 15 will root more freely than those inserted during January and finally make better plants.

Cutting Down.

Why do we cut down our plants? Of course the answer is, to get dwarfer plants, clothed with good foliage to the very pots and rather good flowers. Is there no other method with results like those of the cut-down system, but more simple, and perchance giving better results, for the north especially, than the cut-down one? All know that the time when the plants have been cut down is a rather critical one, and that one is obliged to bestow very much care upon the watering. If at the time when the plants have been cut down you have the misfortune to have a spell of heavy rain, you scarcely know what to do. Those who have plenty of room will put them into frames and be safe, and others will lay down the pots on their side; but if the rain goes on for a week or more you will get rather uncomfortable.

This season I have not cut down at all, because last year I have had such satisfactory results with another method—let me call it the "half cutting-down." When the young plants have reached a height of about 7 inches or 8 inches I take off not the tips of the growths, but about 3 inches or 4 inches. To do this no knife is necessary, as the growth is yet sappy. Almost simultaneously the new growths appear, of which I select three or four of the strongest, and on these I take the first buds. As the young shoots come forth almost at once, there is no danger of over-watering. This is one advantage, but the other ones are not to be despised. First, such a plant does not grow taller than a properly cut-down one, and secondly, such plants flower earlier than the cut-down ones, and even earlier than the unstopped ones. Grown on this principle, Stanstead White was from 28 inches to 30 inches high; naturally grown, I mean unstopped, about 50 inches. The Puritan and Secrétaire Cassagneau reached nearly the same height. The flowers were good, not quite so large as those grown upon unstopped plants, but the dwarf growth, the early flowering, and the relatively small pots used—7-inch—balanced this.

I often wonder that you are searching for very late varieties. For us they are utterly worthless. Chrysanthemums are naturally autumn flowers, and I think it is rather contradicting Nature to try to make them spring flowers. Last year I cut my last blooms about Christmas, and I was very glad they were over. About that time we have so many other flowers, the first fresh Roses, Lilacs, Lily of the Valley, Hyacinths, Tulips, Cyclamen, Azaleas, and so forth, which so remind us of the coming spring, that no one takes any interest in autumn flowers.

Standards.

When I was in England I saw a good lot of Chrysanthemum shows in London and in its neighbourhood. When I first saw a Chrysanthemum show in your country I was quite astonished. But I did not see any standards, with the exception of a very few at the Crystal Palace, if I remember rightly, and even these did not please me. They were of a very stiff, but not artistic appearance, with the blooms distributed rather too evenly over the whole crown. I grow my standards without any wire rings, and only use one stick to every plant. The cuttings are secured as soon as possible and grown on with one stem till the first break appears; then I take up three to five shoots, and these are generally stopped about three times during the summer. There is no disbudding, and what beautiful heads of flowers you get in this way. The kinds I grow are Martinmas, Mme. de Sévin, Roi des Précoces, W. Holmes, Ulrich Brunner, Petite Jeanne, Alexandre Dufour, and Margot. This last named kind I grew for years in bush form, and I had almost decided to discard it on account of its straggling habit of growth. But I happened to give it a trial as a standard, and it is one of the most elegant Chrysanthemums I have got. I have also grown a few pompons, as Black Douglas, Mlle. Élise Dordan and such like. For half standards I recommend Fleur Parfaite and Norbert Puvrez, a truly charming kind. I have also tried the well-known Sœur Mélanie, but there was something wrong; a large part of the buds was blind.

I am surprised that when one speaks of good early varieties for cutting, decoration and general purposes Martinmas has not been named. I consider this one of the very best early Chrysanthemums I have, as good among the pinks as W. Holmes among the browns. Last year I received William Seward. I hoped it might take the place of the tall Jeanne Délaux. The buds began to open and the colour was beautiful, but when the flowers were fully open, unfortunately the beauty and the rich velvetiness of the colour were gone. The petals curled up and showed their reverse, of rather a faded hue. Does it always behave like this? The sun did not touch the blooms, I am sure. Does there exist any kind of the same lively, fine colour as Edouard Audiguier, but of a better and dwarfer habit of growth? Would it not be possible for some grower to give a list of the very best kinds of Chrysanthemums for every month, indicating their height and colour? I fancy that many beginners like myself would be grateful for such a list.

R. Katzer.

Pawlowsk, near St. Petersburg.

The Chrysanthemum in France.—M. H. Fatzer in a recent number of the *Revue Horticole* contributes an interesting article on the cultivation of large-flowering varieties of this popular favourite, dealing more particularly with those which he calls "la race Calvat." After a cursory review of the flower in America, in England, and in Australia, the writer proceeds to call attention to the need for some special Chrysanthemum committee being formed to work on lines analogous to those pursued by the N.C.S. of London. It is indeed strange that in a country like France, where so much has been done to improve and popularise this flower, no such body exists. M. Fatzer is an advocate for a committee being established by the National Horticultural Society of France, which committee should be composed of growers and experts, whose duties should be the examination of novelties and the awarding of certificates to meritorious exhibits, the organising of shows and appointing of judges, and furthermore the publishing of reports of the meetings of the committee containing lists of varieties and their adaptability for various purposes. We are told that the admirers and grower of the flower are on the increase, and that shows are more numerous all over France than ever. M. Fatzer's suggestions are therefore worthy of mature consideration by French nurserymen interested in the Chrysanthemum.—Chrysanth.

Chrysanthemums on walls.—The plants growing against walls have not made so much progress as in some seasons. The dry weather experienced during the months of May and June checked the growth considerably, especially where the plants lacked moisture at the roots. However, the foliage has an especially healthy tone about it, which augurs well for a good flowering season. Many of our plants at the foot of a south wall have been in their present position several years, and as they did not thrive during June as I cared to see them, I gave them a thick mulching of cow manure, covering it lightly with soil for the sake of appearance. Before putting on the soil I gave them a heavy watering, washing down to the roots much of the manurial properties contained. The plants are now progressing quite satisfactorily, and I expect good returns at the end of November when most of the ordinary indoor varieties are losing their freshness. Most of the branches are now making a natural break. If a few extra large blooms are wished for, this bud must be "taken," removing all growths that cluster about it. I, however, prefer a number of smaller blooms, and instead of pinching off the shoots I pinch off the bud and fasten the growths securely to the wall. I find nothing better for this purpose than the old-fashioned plan of using shreds and nails. If the shoots are left until they hang downwards, they become crooked and unsightly. Much better is it to fasten them up as growth proceeds; the wall is then much better covered, forming during the summer a dense mass of green.—E.M.

SHORT NOTES.—CHRYSANTHEMUMS.

Chrysanthemum Eulalie Morel.—This is one of the best early sorts. The colour is a shade of

mauve-pink and the flower is of Japanese form. It also grows and flowers very freely.—H.

Chrysanthemum Bronze Bride should be added to the select list of early sorts for open air culture. It is a pompon, but rather large for the type, and assumes a fine bushy habit of growth. The bronzy rose-tinted blooms are distinct and pleasing.—H.

Chrysanthemum Mme. Marie Masse.—A fine bunch of the above early sort was exhibited among a collection of hardy flowers at a flower show the last week in July. It is a loosely-formed reflexed Japanese bloom of moderate size. The colour is pink of a nice shade. It is free and an excellent variety for open air culture.—H.

Chrysanthemum M. Gustave Grunerwald.—This early sort is now (Aug. 1) in bloom in the open border. It is a full reflexed-shaped flower about 4 inches across. The colour is a shade of nice bright lilac. It is very free flowering; so much so, that there is some difficulty in obtaining leafy bushes. As a pot plant under glass I do not think it so valuable as when allowed to blossom in the open air. The colour in the former position assumes a dirty, unattractive shade. The old stools require some protection in the winter, it being a somewhat tender sort.—S.

Rose Garden.

CLIMBING ROSES IN FRANCE.

In the following article I wish to describe a very interesting collection of climbing Roses cultivated by MM. S. and P. Cochet, Rose growers, at Suisnes, near Grisy-Suisnes (Seine-et-Marne), and which I had the privilege of inspecting last June 23.

Without having seen it, it is absolutely impossible to imagine a more enchanting sight than is afforded by the perspective of lines of climbing Roses along the walks in a garden, where the multitudinous flowers, especially in the morning when the dew is on them, or in the evening when the sun is setting, readily recall to one's mind the embellished splendour of the gardens of ancient Rome, at least as the imagination loves to picture them. It is, indeed, a charming scene at this delightful time of the year, when Nature, in the full plenitude of her vigour, gratifies our sight with the flowers which she presents to us and which she produces for us in continuous succession. In the presence of such a spectacle, what stronger feeling can animate one's breast than the resolution of applying oneself with redoubled vigour to the culture of the Rose and to the improvement of the numerous varieties which have been already obtained?

At Suisnes the climbing Roses are grown in a simple manner without any elaborate device, their intrinsic merit and superb appearance being thereby greatly enhanced. Let the reader picture to himself a walk 13 feet wide and at least 162 yards in length running in a straight line from the centre of the dwelling-house, and exhibiting on both sides, at the height of about 8 feet from the ground, an unbroken line or garland of colour in which white, red, and pink more or less prevail, and he may form an approximate idea of the richness and elegance of this mode of embellishment. Each variety of Rose is represented by two specimens, which are planted opposite to each other, one on each side of the walk, so that the whole plantation is in this respect arranged with the regularity of a flower bed. The distance between the plants at the base of the stems is 8 feet. A rod of iron wire (No. 18) fixed perpendicularly and then bent horizontally at the top affords a ready and regular support for the long branches of the Rose trees. I may add that on level ground (as it is at Suisnes) the shoots may be trained on both sides of the iron prop at the top, while on sloping ground they should, on the contrary, be trained to one side only, that is in the direction of the upward slope of the declivity. Amongst the numerous varieties of climbing Roses which I had time to examine at Suisnes a certain proportion seemed to me, from their vigour of growth, free flowering, and hardiness, to be worthy of special notice. These, which I am now about to enumerate, are respectively referable to four typical species, viz.: (1) Rosa multiflora, Thunberg (1781); (2) Rosa setigera, Mich. (1803), syn., R. rubrifolia, R. Br. (1811); (3) Rosa alpina, L. (1753); Rosa sempervirens, L. (1753); and also to the "Rosa ayrshirea" of gardens.

I.—Rosa multiflora.

The varieties which have sprung from this species are particularly characterised by the stipules or greenish appendages at the base of the leaves, being always more or less deeply pectinated, by which special feature the ever vigorous-growing shoots of R. multiflora de la Grifferaie (which is commonly used in budding) are easily distinguished from those of the finer varieties of Hybrid Perpetual Roses.

Rosa multiflora (Thunb.).—This typical species, which is too rarely met with in gardens, is of such vigorous growth that it easily attains a height of from 10 feet to 13 feet. The leaves are soft to the touch, and the flower-clusters, which are always very numerous, light and well furnished, are produced in long, erect, terminal, pyramidal panicles, which have a most graceful effect; the individual flowers are small, single, pure white, and rather resemble those of the Bramble. Unfortunately, as is also the case with most of the species or varieties which I am about to describe, this type is not perpetual-flowering; but it flowers so very abundantly in May and June, that I do not hesitate to recommend it here. A good many years since, MM. Cochet raised two varieties of R. multiflora with semi-double flowers and quite as vigorous growing as the type. One of these has pure white and the other pinkish-white flowers, and both possess considerable ornamental value.

R. m. var. de la Grifferaie.—According to M. Crépin, Director of the Botanic Garden at Brussels, and a high authority on Roses, this well-known variety is a singular kind of hybrid between R. multiflora and R. gallica. The plant possesses the same vigour of growth as the preceding kind, but the leaves are larger, the flowers double and very large for the species, and change to a more or less vinous-pink colour as they advance in growth. In La Brie, this variety, which is to be recommended as a climbing Rose, is extensively used along with R. canina as stocks for budding the numerous varieties of Hybrid Perpetual Roses. It is very easily multiplied from cuttings of the woody branches put in in March, but when budding it is essential to success to operate upon a well-rooted stock which has stood for a year in a nursery bed instead of using cutting stocks which have just been planted out for the purpose of budding in the open ground, and which, not being regularly watered, cannot be depended upon to succeed so well. In this series I can recommend the following varieties:—

R. m. var. Graulhier.—An interesting form, with medium-sized double white flowers.

R. m. var. a bois brun.—In this the branches and foliage are of a very ornamental purplish hue, which produces a particularly good effect in a mixed plantation of climbing Roses.

R. m. var. tricolor.—The flowers of this variety are nearly as large as those of R. m. de la Grifferaie, but are more globular in form, while the petals are crenulated and exhibit variable reflections of colour, being bi-coloured rather than truly tri-coloured, that is, they are pink and white.

In this group I may also include some specially fine kinds, some of which are described in the catalogues as varieties of Rosa polyantha (R. multiflora of Thunberg), and others as hybrids of the climbing Hungarian Rose.

R. m. var. Turner's Crimson Rambler.—A new variety, bearing rich clusters of flowers in ready-made bouquets. Individual flowers of medium size, semi-double, of a fine dazzling poppy-red colour, and with very downy flower-stalks.

R. m. var. Bennett's Seedling.—This variety comes very near the type in habit of growth and style of flowering, but the flowers are somewhat larger, semi-double, and white, very slightly tinged with pink. It is also somewhat late-flowering, and is especially remarkable for its exceedingly numerous and well-furnished, erect-growing clusters of flowers.

R. m. var. Daniel Lacombe.—A very vigorous-growing variety, bearing small white flowers with a yellowish centre.

R. m. var. Petit Postillon.—Flowers of medium size, very double, pink. (Climbing Hungarian hybrid.)

R. m. var. Mercédès.—Flowers rather large-sized, well formed, and of a fine bright pink colour; prickles prominent. (C. H. hybrid.)

R. m. var. Gilta.—Flowers globular in form, double, lilac-pink. (C. H. hybrid.)

R. m. var. Mme. Richter.—Flowers double, well formed, glazy-pink. (C. H. hybrid).

R. m. var. Ernst Dorel.—Flowers rather large-sized, cup-shaped, deep pink. (C. H. hybrid.)

II.—Rosa setigera.

The numerous varieties in this group are at once specially distinguished by their leaves being rough to the touch, shining on the upper surface, downy and glaucous underneath, deeply toothed at the margin, and furnished with curved prickles on the mid-rib and principal veins. The flowers are borne, mostly in threes, in numerous corymb-like clusters.

Rosa setigera (Michx.).—A native of North America, this species, which is very rare in cultivation, is remarkable for its vigorous growth and hardiness. It is also very ornamental with its soft green, crimpled leaves and its fine, bright pink flowers, which are of medium size and not quite semi-double. In this season I can specially recommend the following:—

R. s. var. Beauté des Prairies.—Flowers well formed, rather large-sized, globular in shape, and of a fine bright pink colour.

R. s. var. Mill's Beauty.—A very vigorous-growing and most noteworthy variety, producing a brilliant effect when its flowers, which are of a redder colour, but not so double as those of the preceding variety, are in the full flush of their freshness. An extra fine kind.

R. s. var. Russel Cottage.—A very vigorous-growing and floriferous variety, with medium-sized double flowers of a superb vinous-red colour.

R. s. var. Belle de Baltimore.—A vigorous-growing and very free-flowering variety, with medium-sized double flowers, white, slightly tinged with flesh colour.

R. s. var. Mrs. Edgeworth.—Flowers medium-sized, very double, lilac-pink, with glandular flower-stalks, which impart to them somewhat of the appearance of Moss Roses.

R. s. var. Virago.—The finest of the Roses which bear the name of Climbing Hungarian; flowers semi-double. An extra fine China Rose.

III.—Rosa alpina.

Not quite so vigorous-growing as the varieties of the preceding section, those which belong to this group have, as their chief characteristics, branches almost devoid of prickles, long, elliptical leaves with marginal teeth far apart, and stipules which are very broad, especially at the extremity. Amongst the handsomest varieties of this section are—

R. A. VAR. MME. SANCY DE PARABÈRE.—Flowers large, double, of a fine bright rose colour. An extra early-flowering variety.

R. A. VAR. CALYPSO.—A vigorous-growing and equally early-flowering variety, with large, double, flesh-coloured flowers.

R. A. VAR. ORNEMENT DES BOSQUETS.—Remarkable for its glaucous foliage and its fine pink single flowers.

R. A. VAR. GRACILIS.—A vigorous-growing variety with medium-sized double flowers of a fine brilliant bright pink colour.

R. A. VAR. ZÉPHYRINE DROUIN.—A variety with semi-double, almost single, brilliant red flowers, often described in catalogues as belonging to the section of Bourbon Roses, but considered by MM. Cochet as properly referable to R. alpina. It is possible, considering the vigorous habit of growth, the absence of prickles on the wood, and the highly-developed stipules of this Rose, that it might be a hybrid between R. alpina and R. borbonica. However that may be, I remember having seen in the year 1884 the Rose Zéphyrine Drouin very skilfully planted as a climbing Rose at Dijon, in the gardens of the Place Saint-Pierre, so as to form a kind of pyramidal furnishing to the naked stems of trees of Acer Negundo foliis argenteis which had been grafted as tall standards and formed round-headed specimens. This was done in the following manner: At the distance of 20 inches from the foot of each tree four iron wires were fastened to pegs in the ground, the free ends of the wires being then carried up and secured to the trunk of the tree just underneath the head of branches. A light invisible support was thus provided for the Roses, which were planted close to the pegs. The effect resulting from this arrangement was one of the happiest imaginable, and the plan is well deserving of recommendation.

R. A. VAR. BOURSAULT.—This variety, which has single flowers of a fine red colour, is considered by M. Crépin (the authority cited above) to be a hybrid between Rosa alpina and R. indica.

IV.—ROSA SEMPERVIRENS.

Although rather delicate for the rough winter weather which now and then prevails in the neighbourhood of Paris, the varieties of this section are interesting from the peculiarity of their foliage being almost evergreen, the leaves being glabrous and shining on both sides, and also on account of their numerous flowers, which are mostly white, and are borne in corymbs of large dimensions. Among the finest varieties are:—

R. S. VAR. FÉLICITÉ-PERPÉTUE.—An exceedingly vigorous-growing and free-flowering variety, raised by M. Jacques at the Château de Neuilly in the year 1827. The flowers are of medium size, very double, white, slightly tinged with flesh colour when opening, but becoming paler as growth advances. Back or outside of the petals lilac-pink.

R. S. VAR. REINE DES BELGES.—An equally vigorous-growing and free-flowering variety, with medium-sized, pure white flowers. Extra fine.

R. S. VAR. FLORE.—A vigorous-growing variety, with spherical flower-buds and medium-sized, double, extra fine flowers, pink, changing to soft flesh colour, on long, graceful flower-stalks.

R. S. VAR. PRINCESSE MARIE.—A very vigorous-growing and free-flowering variety, with medium-sized double flowers of a handsome very light pink colour. This superb variety also was raised by M. Jacques at the Château de Neuilly.

R. S. VAR. THORESBYANA.—Flowers smallish, numerous, pure white; flower-buds cream-coloured.

R. S. VAR. AMADIS.—Flowers medium-sized, double, white; outside of the petals lilac-pink. A good variety.

R. S. VAR. MUTABILIS.—An extra fine variety, with flowers of a fine satiny pink colour.

R. S. VAR. A FLEURS ROSES.—Laffay.

V.—ROSA AYRSHIREA.

The varieties of this section are remarkable for their very vigorous habit of growth, their numerous sharp-pointed prickles and their leaves being soft to the touch and composed of oval-acuminate leaflets regularly and finely toothed. The following selection is recommended:—

R. A. VAR. DUNDEE RAMBLER.—An exceedingly vigorous-growing and free-flowering variety, with small white flowers, which become slightly tinged with pink when fully expanded.

R. A. VAR. COUNTESS OF LEVEN.—A very vigorous-growing and free-flowering variety, with small, nearly double, very handsome pure white flowers.

R. A. VAR. SPLENDENS.—An exceedingly vigorous-growing variety, with medium-sized white flowers, slightly tinged with pink.

R. A. VAR. A FLEURS PLEINES.—A very vigorous-growing and free-flowering variety, with large-sized, almost double flowers of a pink colour, with golden-yellow reflections. An extra fine variety.

In addition to the foregoing choice varieties, the following kinds (belonging to other species) may also be mentioned, their value as ornamental subjects being beyond dispute:—

EVA CORINNE (Michigan).—A very vigorous-growing and free-flowering Rose, with large-sized, double, light red flowers.

ANNA MARIA (Michigan).—Flowers double, of a soft pink colour.

MALTON (Bengal hybrid).—A vigorous-growing variety, with medium-sized, double, scarlet-red flowers.

ROSA BRUNONI.—A singular and very vigorous-growing kind, distinguished by its glaucous foliage and its single, white, largish flowers, the yellow stamens of which produce a very fine effect.

Very recently MM. Cochet raised a double-flowered variety of R. Brunoni which is eminently worthy of note. It appears that such a double form is not entirely a novelty, but has already been introduced into cultivation, from which, however, it had almost completely disappeared.

ROSA POLYANTHA GRANDIFLORA DE BERNAIX.—According to M. Crépin, this is the true R. moschata, Herm. (1762), and synonymous with the preceding species, R. Brunoni, Lindl. (1820).

MÉTÉOR (Noisette hybrid).—This and Virago are beyond doubt the finest of the kinds known as Climbing Hungarian Roses. Flowers of a superb brilliant red colour.

Lastly, to conclude this copious enumeration of climbing Roses, I shall mention two varieties of this class raised by MM. Cochet, viz.:—

MARIE ROBERT (Noisette).—Flowers large-sized, globular in shape, with slightly rumpled petals, China rose colour with coppery reflections. Very fragrant. A superb variety.

MADAME PIERRE COCHET (Noisette), syn., Surpasse William Allen Richardson.—Flowers larger than those of the last-named variety, fragrant, of a fine nankeen-yellow colour, shaded with golden yellow. Foliage glistening. An extra fine variety.

These last two varieties belong to the group of climbing Roses of the Tea or Noisette section, with superb large flowers (not produced in great corymbs) in which yellow tints, orange, and copper colour are of frequent occurrence. These, however, in the climate of Paris, at least, are not so hardy as the Roses of the extensive and fine series which I have just enumerated. The only defect in this series is that it does not include any of the truly perpetual-flowering kinds. For all that, the cultivation of these climbing Roses cannot be too strongly advocated, especially in extensive grounds or parks where, as has been done at Suisnes, room could easily be afforded to form an avenue of them which at flowering time would present the most charming sight that the owner or occupier could wish for. These climbing Roses, of course, are equally useful for furnishing fences, arbours, bare trunks of trees, &c. Most of the varieties are readily multiplied from cuttings, and also by budding on the wild Brier stock. The only attention which they require is to reserve, in the growing season, a certain number of vigorous young shoots at the base of each plant and in spring-pruning to cut away part, if not all, of the branches which bore flowers in the preceding year. These will be advantageously replaced by the young shoots which have been retained as mentioned above, and which will eventually become branches laden with flowers.—CH. GROSDEMANGE, in *Revue Horticole.*

Rose General Jacqueminot.—For usefulness it will be some time ere this old sort is beaten. In a walk through the Rose department of Jackman's, Woking, during the dry, hot weather of the end of June this variety appeared the most showy of all the crimson kinds and the least affected by the elements. When in good form it is a splendid flower for exhibition although the scarcity of petals renders it liable to open quickly, but for the garden as well as for forcing under glass it may be cultivated with a certainty of success.—H.

NOTES ON THE THREE N.R.S. SHOWS.

I DO not call to mind any season when the whole of the three shows have been so satisfactory as those of this year. After so sharp a winter and an exceptionally dry spring and early summer many of us were agreeably surprised at the Roses from all parts as shown at Gloucester. York just previous broke the record in a class for seventy-two blooms, there being, if memory does not fail me, no less than eleven lots. But it was not necessary to have seventy-two distinct varieties, and we all know how very much this simplifies the staging of so large a class. At Gloucester there were eight in the premier class for nurserymen, seven put up in the twenty-four singles, while no less than ten competed for trebles of a like number of varieties. Both at the Crystal Palace and Derby the competition was above the average in numbers. At Gloucester there was a magnificent stand of forty-eight from Messrs. Harkness and Sons, and which contained a silver medal bloom in Comtesse de Ludre, probably the finest flower ever yet staged of this variety. There are many curious features to note when one attends these shows regularly. At Gloucester Messrs. Harkness and Sons won in the chief classes, and were closely followed by Mr. B. R. Cant. At the Crystal Palace the tables were somewhat turned, while at Derby Messrs. Harkness and Sons simply won in all the main classes for mixed Roses, besides again taking the silver medal for a H.P., this time with A. K. Williams, in their winning stand for the Jubilee trophy. At Derby, too, Mr. B. R. Cant was second in no less than four of the chief classes for nurserymen (mixed Roses), and Messrs. Dickson, of Newtownards, Ireland, a close third. In more than one of these the competition was very close. Personally I think the Derby show the best of the three if we look at uniform quality. The best H. Perpetuals were at Derby, and the best Teas or Noisettes at Gloucester. The show at the Crystal Palace was good in every way, but not so fine as we might expect the show of the year to be. The prettiest lot of Hybrid Briers was at Gloucester, and I was much struck with a semi-double crimson named Jeannie Deans. Among several other new ones not yet in commerce this one was the best in my estimation. Garden Roses were fairly good both at Gloucester and the Crystal Palace, but I must confess to a surprise at Derby, for although so late for these charming Roses, they were better than at the two previous exhibitions. The most conspicuous Rose during the year has been Her Majesty. At the Crystal Palace it won the silver medals as being the best H. Perpetual in the show both among amateurs and nursery-

men. Mr. B. R. Cant's specimen was simply perfect. At Derby Mr. E. B. Lindsell won the medal for a H. Perpetual with Xavier Olibo, and, singular to say, this gentleman won with the same variety last season. Her Majesty won two silver medals, Comtesse de Nadaillac also two, Comtesse de Ludre, La Boule d'Or, Maréchal Niel, Xavier Olibo, A. K. Williams, Marie van Houtte, Ethel Brownlow, and Horace Vernet took the same honour once each. I believe that Comtesse de Ludre is the only one of the twelve that has not gained similar honours in previous seasons.

A. Piper.

SHORT NOTES.—ROSES.

Rose Jean Cherpin.—One does not often meet with this Rose now, and yet in colour it is among the most distinct of all. It is quite a violet-crimson. The flowers are not large, but well formed, and the tree is particularly robust and hardy.—H.

Rose Laurette Messimy.—This very distinct Rose is one of the more recent of the China sorts and is not too well known. Its rose shaded yellow blossoms are exceedingly pretty. Like the class, it is free-flowering, and valuable for planting in a mass.—S.

Rose Mrs. John Laing.—As a good all-round Rose this has few equals. The size is large enough and shape perfect. It grows with particular freedom, is almost proof against mildew, highly fragrant, and a perpetual bloomer. At the Woking flower show on the last day of July a capital box of it was exhibited by Mr. Jackman.—S.

Rose l'Ideal is a charming variety for training against a wall. In many respects, such as size, shape of bloom, and growth, it resembles the popular W. A. Richardson, but the colour is different and most attractive. Yellow and red are the predominating shades, and over all is a dark metal-like tint not seen in any other kind. The sort is very handsome in the bud state; therefore valuable for button-holes.—S.

Notes of the Week.

Tufted Pansies.—Mr. D. B. Crane sends us from his garden at Highgate a lovely lot of Pansies of the rayless type. They are mostly seedlings, but one named Ethel Hancock is a gem, its flowers pure white, with a rich yellow eye. The scent of them all is delightful.

Tufted Pansy J. F. Riding.—I am sending you a bunch of tufted Pansy J. F. Riding. It is one of the freest in my collection (about forty of the best sorts), very sweet scented, and has remarkably long stalks, making it very useful for cutting.—Amos Perry, *Winchmore Hill.*

Streptocarpi from Blandford.—I am forwarding per to-night's post a small box containing Streptocarpus blooms, also photos of two plants in bloom. The cut blooms, I am sorry to say, are past their best. There were over 100 blooms fully developed at one time on each plant.—Arthur Allsop, *Bryanston Gardens, Blandford.*

*** Very large flowers and very pretty in colour.—Ed.

Adiantum pedatum.—This hardy North American Maiden-hair is a handsome outdoor Fern in places suited for its growth. In Mr. Sclater's charming Fern garden at Newick Park it grows luxuriantly, and there are here some of the best pieces that we have ever seen out-of-doors in any garden in the south of England, the tufts tall, with wide-spreading fronds, and a perfect picture of graceful, healthy growth.

Nemesia strumosa—By same post we send you specimen trusses of this annual from our grounds at Exminster. What we wish to draw your attention to is the brilliant and various shades of colour we have by selection now obtained. In the beds we have all the shades, from creamy white through yellow and orange down to a deep vivid crimson. The plants, through giving them plenty of room—nearly 2 feet apart—have thrown out sturdy branches bearing abundance of bloom, the individual flowers being larger and of greater substance than we hitherto have had them.—R. Veitch & Son.

Onoclea sensibilis.—The conventional way of planting hardy Ferns in association with decaying roots and tree stumps has never yet given us a picturesque result. At Newick Park Ferns are planted in groups and spreading masses between the shrubs and flowers, and they make a very different picture. Onoclea sensibilis, instead of being confined to a solitary tuft, runs freely through the moist soil, and we saw rich masses of it covering many yards of ground with a luxuriant mass of its distinct fronds, growing as freely as the native Bracken and giving a beautiful aspect of graceful Fern growth all too rare in gardens.

Francoa appendiculata.—This hardy perennial deserves to be much more grown than it is at present. In a Sussex garden I noticed a very fine specimen measuring 2½ feet to 3 feet in height, which has stood several winters without any protection. The flowers are disposed similarly to those of the well-known Bridal Wreath, but the white flowers are shaded with pink, and have a deep crimson blotch towards the base of each petal. The leaves are deep green, 8 inches to 10 inches long, and deeply lobed, especially towards the base where the midrib is almost bare. It is apparently of easy cultivation.—F.

Saxifraga peltata.—This, when well grown, is a fit associate for Gunneras, Rheums, and other noble-leaved hardy plants, and all who have a deep moist soil should plant a group of it under conditions that favour the fullest luxuriance of leaf growth. A very fine group of it is one of the features of the Fern garden at Newick Park, where it sends up its strong, round, shield-like leaves on stems from 4 feet to 6 feet in height, some of the larger ones being nearly 2 feet in diameter. Several individuals of average height could easily have hidden in the group at the time we saw it. It is certainly unique among Saxifrages, which are nearly all of lowly growth.

Roscoea sikkimensis is a rare and beautiful perennial, now in full bloom in a border of the gardens at Offington, where it has proved hardy for several years. The plant at a first glance somewhat reminds one of Tradescantia. It grows about 18 inches high, and has slightly undulating sessile leaves, about 8 inches long and three-quarters of an inch wide, with entire margin. The stems are stout in proportion, being nearly half an inch thick, and bearing at the top several peculiarly-shaped deep purple flowers with yellow anthers. The under lip is very large, deflexed, and measures about an inch across, while the upper lobe forms a small pointed hood with a white centre.—F. W. M.

Polygonum filiforme variegatum.—This handsome Japanese Knotweed is perhaps the most distinct and beautiful variety of its class. It is still very rare, unfortunately, but has proved to be perfectly hardy in Sussex, where I noticed a compact bush about 2 feet high and 2½ feet in diameter in a half-shady position at Offington, Worthing. The large oval or oblong leaves, each about 5 inches long and 3 inches wide, are beautifully variegated with white. It is a most effective plant, and its leaves look more like those of the well-known stove plant Ficus Parcelli than those of a plant that can be grown out of doors.—F. W. M.

Angræcum Scottianum.—The Angræcums combine to as great a degree as any other tropical genus of Orchids that beauty of flower and remarkable structure which together form the chief attraction of the natural order. A. Scottianum is one of the most interesting and attractive of the smaller species. Its foliage is terete, the leaves being in two opposite rows, about 4 inches long and of the thickness of a small pencil. The flowers are very rarely seen more than one on the scape. Like nearly all the Angræcums, they are white, the lip, which is the largest and most conspicuous part of the flower, being of a purer shade than the sepals and petals, which have an ivory tint. The lip is about 1½ inches across and of somewhat rectangular shape, lengthening out behind into a slender spur 5 inches long. The species is a native of the Comoro Islands, which are situated between the northern point of Madagascar and the East Coast of Africa. It was discovered by Sir John Kirk about seventeen years ago.

Tiger Flowers (Tigridias).—The acquisition of several new and very beautiful varieties of Tigridia has caused more attention to be turned to them, and they deserve it. If they cannot be planted in the garden and left to take care of themselves, very little extra trouble is involved in lifting them in autumn and replanting in spring. At Kew recently we saw a bed of the orange-yellow Tiger Flower covered with gorgeous flowers, the effect such as no words can describe. At the Drill Hall on Tuesday, Tigridias were admirably represented in the group from Messrs. Wallace and Co., of Colchester. In addition to the older and better known forms, they showed some grand flowers of T. lilacea, which was figured in The Garden of March 31, 1894, and another gem—T. grandiflora immaculata—of a unique character among Tiger Flowers, having none of the striking blotches of colour seen in other forms, but a self flower of noble form and purity, white, with a pale sulphur suffusion on the edges of the inner segments.

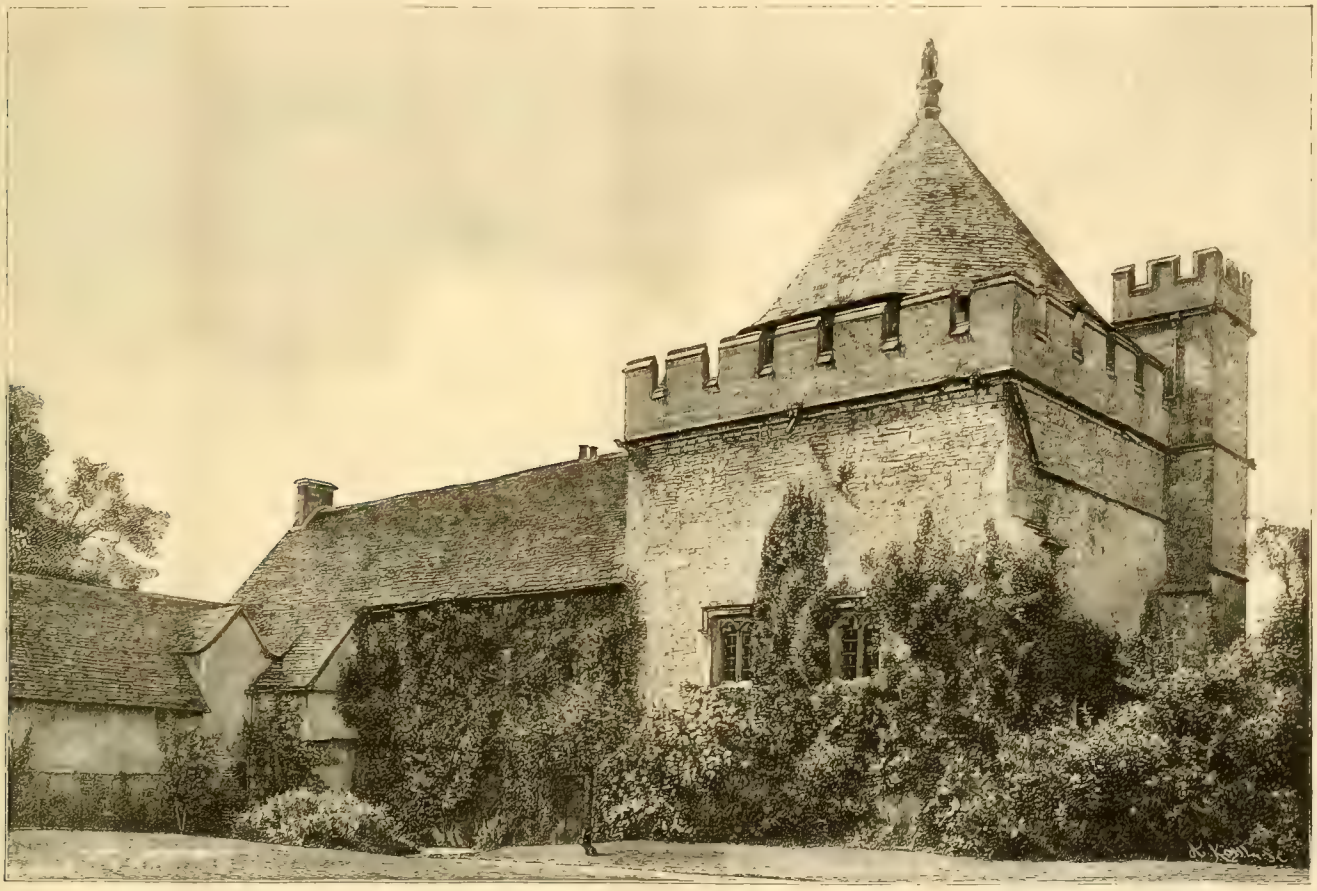
The Tree Mallow (Hibiscus syriacus).—This is one of the most beautiful flowering shrubs to have and enjoy in the garden during the late summer and early autumn months, and yet, strange as it may seem, we hardly ever see it. It comes into bloom when shrubs chiefly are flowerless, and gives a succession of beautiful blooms for several weeks, whilst its importance is now the greater by reason of the rich variety of pretty colours that are now to be had. We saw some charming bushes at Newick Park the other day profuse in bloom from top to bottom, one with flowers of the purest whiteness especially conspicuous, and a gem among flowering shrubs at any time. In Battersea Park at the present time it is also flowering well. Although this shrub is not a success perhaps in poor light soils that dry up quickly, there are plenty of places where it would thrive and be a source of interest late in summer. Although some might have avoided the Tree Mallow in the past because of the dingy purple tone of colour that certain varieties possess, this should not deter them from planting it now that varieties are to be had in brighter and lovelier hues. Those in pure white, soft pink and rich rose must surely please even the most sceptical in flower colours.

Campanula Vidali.—I was much surprised to find this lovely greenhouse plant flourishing out of doors in Major Gaisford's garden. Whether it will really stand the winter remains to be proved, but even if planted out only for the summer months the plant would be a decided acquisition. It has very thick woody stems and forms a compact shrub with spathulate, large, fleshy and serrated leaves, 3 inches to 4 inches long, looking more like a large form of Mesembryanthemum or Sedum than a Campanula. The specimen here referred to is little more than a foot in height, but throws up its long racemes of flowers in an oblique direction on a stiff stem 18 inches long and bearing eight to ten large campanulate white flowers, which are very viscid and waxy in appearance. The wide corolla has at the bottom a fleshy disc-like receptacle, white in colour and nearly three-quarters of an inch in diameter, surrounded by a broad band of the deepest orange. From the centre of this receptacle springs a large white club-shaped style of fleshy appearance, and fitted at the top with a three-lobed stigma of peculiar form. Both leaves and stems exude on breaking a milk-white sticky sap similar to that of Euphorbia.—F. W. Meyer, *Exeter.*

STANTON HARCOURT.

This is the ancient home of the Harcourts, and doubtless centuries ago was the stronghold of the surrounding country, whilst the land for miles around, it is known, was vested in the Harcourts of that period. The Stanton Harcourt of to-day is but a relic of a distant past, and appeals more to the antiquarian and historian than to the lover of gardens and flowers. There is plenty to show that the ancient house was once of great extent, but much has been carried away to another part of the county, and used in the erection of another house. It is a great pity that such a building, whose existence in part has quite outlasted the passage of centuries, could not have been preserved in its entirety, and surrounded by a beautiful garden, for which the situation is most inviting.

Stanton Harcourt is not many miles from Oxford, and stands in the midst of an undulating and fertile district. The portion shown in the engraving is the ancient kitchen, and the date when this was erected antiquarians have been unable to settle, although repairs that date back to the earliest part of the fifteenth century are apparent. This kitchen has no chimney, but the fires were made on the hearth and the smoke found its way out of the lantern erection at the top, which is provided with a series of shutters that were closed or opened according to the direction of the wind. An ancient tower of more recent erection than the kitchen is also well preserved. Its lowest story served as the domestic chapel of the place. Ascending by a winding staircase of stone the third and topmost story is reached, and here Pope in the year 1718 finished his translation of the fifth volume of "Homer," having sought out this secluded place where he could work undisturbed. The place is rich in its associations of literature, history, and architecture, but there is nothing to show that gardening has ever flourished here.



Stanton Harcourt, Oxford. Engraved for The Garden *from a photograph by the late Mr. J. L. Robinson, C.E., Dublin.*

Trees and Shrubs.

THE SHRUBBY POTENTILLAS.

What few yellow-flowered shrubs we have in the late summer season belong chiefly to the Genista family and to the Hypericums.

Potentilla fruticosa, however, a member of the Rosaceæ, is at present the most attractive shrub in bloom with yellow flowers. It is one of the most widely distributed shrubs in the Northern Hemisphere, being found in Europe (Great Britain), Asia, and North America. As might be expected from this, it exhibits considerable variation, but the differences are chiefly in habit and leaf, the flowers being always yellow. It is a bush of neat rounded habit, varying from 1 foot to 3 feet in height. The leaves present a sort of combination of the digitate and pinnate arrangement, and the leaflets (varying in number from three to nine) are sessile, oblong-lanceolate, and more or less hairy. The dwarfest forms of this species are the most tomentose and have the fewest divisions to the leaf. The flowers are borne in corymbose clusters, each one being from 1 inch to 1½ inches in diameter, and of a bright Buttercup shade of yellow. The exceptional brightness of the earlier part of this summer has apparently suited this Potentilla, for it is now, and has for some weeks been crowded with blossum.

P. glabra (or davurica) is a dwarf species possessing foliage of the same character as the previous one, but smaller and glabrous. The flowers differ also in being white. It is of interest botanically more than horticulturally. It was introduced many years ago from Siberia by the Loddiges firm, of Hackney.

P. Salesoviana is a third species, quite distinct from the two preceding ones. It is of looser habit, and differs markedly in the larger and distinctly pinnate foliage, which is bright green above, but covered beneath with a beautiful silvery down. The flowers are in loose cymes, and each measures about 1½ inches across the spathulate petals. The colour is a faintly rose-tinted white. P. Salesoviana is a native of the Altai Mountains, and is also common on the Cashmere Hills.

These three species, which constitute the shrubby section of Potentilla as represented in English gardens, are of easy cultivation. They like a fairly rich loam to grow in and love abundant moisture, P. fruticosa being not infrequently found in swampy situations in a wild state.

W. J. B.

HYDRANGEAS IN SUSSEX.

During a recent visit to Major Gaisford's very interesting garden at Offington, Worthing, I was much impressed with the beauty of various Hydrangeas then (beginning of August) in full bloom, and a short description of the principal varieties as I saw them may interest readers of The Garden generally.

Hydrangea hortensis variegata is represented by a compact bush about 4 feet in diameter, with handsome, rather glaucous, distinctly variegated leaves and numerous white flowers, changing to pink, borne in large panicled, flat corymbs.

Hydrangea H. tricolor.—This is most ornamental, and forms a bush in size similar to the

last, but the leaves are larger, 5 inches to 6 inches long, deeply crenate, green in colour, but striped and mottled with white, and surrounded at the margin with a broad irregular band of bright golden yellow. The flowers, too, are distinct and ornamental, the small fertile blossoms being of a deep purplish rose colour, while the large sterile flowers are white, changing to pink.

Hydrangea H. japonica var. roseo-alba.—This at Offington forms a noble bush quite 5 feet through. The serrated leaves are small, ovate, measuring scarcely more than 2¼ inches by 2 inches, but the exquisite flowers, which were fully expanded when I saw them, render this shrub most effective. The fertile flowers are white, and surrounded by very large sterile blooms, white in colour, but profusely blotched and suffused with the brightest crimson, the two colours forming a most effective contrast.

Hydrangea mandschurica.—This is represented by a handsome bush measuring 6 feet through. The foliage is similar to that of H. hortensis, but the stems are of a glossy black colour, and the flowers form large, almost globular heads, composed of large blooms of a delicate pink colour, suffused with white.

The varieties Thomas Hogg, H. paniculata grandiflora, and others are also represented, but are too well known to need description. Of the many other rare and beautiful plants contained in this garden I hope to speak again, but the Hydrangeas mentioned were so perfect, that they well deserve a separate notice in this their flowering season. F. W. Meyer.

Exeter.

Spiræa Bumalda Anthony Waterer.—The flowers of this Spiræa are decidedly less bright than they were this time last year, though just as freely produced. If this Spiræa originated from a sport, it is greatly to be hoped that such a desirable shrub as this is not showing a tendency to revert to the type from whence it sprang.—T.

Platycrater Sieboldi.—This handsome Hydrangea-like shrub is quite hardy in Major Gaisford's garden, near Worthing, where a well-grown specimen, about 4 feet in diameter, is now in full bloom and most attractive. The leaves are opposite, lanceolate, with dentate margin, and 4 inches to 5 inches long, by 1 inch in width. The flowers appear in corymbs, and consist of four green sepals and the same number of thick, white, fleshy petals, somewhat deflexed, and forming a handsome corolla about 1 inch in diameter. Some of the flowers have petaloid stamens, but in most cases the latter form a conspicuous cluster, consisting of a very large number of creamy yellow anthers on very slender filaments.—F. M. Meyer, *Exeter.*

Solanum arboreum.—Among hardy plants for sheltered localities in the south of England few can surpass this lovely Solanum. Last winter it did not survive the extreme cold, but the winter before it did not suffer. At Offington a specimen planted against a wall is now in full bloom. The plant is about 4 feet high, with deeply lobed leaves about 8 inches in length. At intervals of an inch or more the midrib of the leaf is covered with very sharp brown prickles. The young shoots produce half way between every two alternate leaves a large raceme of six to nine flowers; these are white, suffused with very pale blue or lilac on the under side of the petals, and a cluster of deep orange anthers in the centre. As each individual flower measures about 1½ inches in diameter the plant has a very noble appearance.—M.

Sutherlandia frutescens.—Among shrubs flowering in August, few can surpass this brilliant Cape Bladder Senna, which is hardy in sheltered places near the south coast, and does well in Major Gaisford's garden in Sussex, where a plant about 2½ feet high is now in bloom. The branches, stems, and under side of the pinnate leaves are covered with minute hairs, and the flowers appear in axillary racemes composed of from six to eight bright scarlet blossoms of the usual pea shape, the erect standard being suffused with white in the centre. The inflated seed-pods are similar to those of Colutea arborescens.—F. W. Meyer, *Exeter.*

Actinidia Kolomikta.—Perhaps the finest plant in the country of this beautiful leaved plant is growing against a south wall at Offington, Sussex, where it has stood unprotected for fifteen years and covers a space of 8 feet by 4 feet. The leaves are cordate in shape, 2½ inches to 3 inches in diameter, with serrate-dentate margin and reminding one of the Lime tree. But the bright green leaves are continually changing colour, first becoming white at the apex and often halfway down the leaf, then turning gradually to all shades of pink and brown. The flowers are white.—F. W. M.

Cytisus nigricans.—As the summer wears away the number of leguminiferous shrubs in bloom becomes smaller and smaller, late spring and early summer being the high tide of the flowering season of these shrubs. There are still a few in bloom, however, and of them none better deserves notice than Cytisus nigricans. This has trifoliate, deep green leaves, and the flowers are borne on a long slender raceme, which stands erect, upwards of a foot in length, at the end of each shoot. The lower flowers open first and are long past before the topmost ones are expanded, thus the plant remains for a good many weeks in bloom. They are bright yellow, the misleading specific name referring to the fact that the whole plant turns black when dried for herbaria. There is a variety of this Broom called longispicatus, which is said to produce larger spikes, but I have raised seedlings from both which do not show any difference when given similar treatment. The species is a native of South-eastern Europe, and was introduced to Britain in 1730. It ripens seed freely, and this affords the best and quickest means of increase.—B.

Ceanothus Gloire de Versailles.—There are numerous varieties and species of Ceanothus now in cultivation, but the majority require the protection of a wall to enable them to survive our winters without severe injury or even death. C. azureus and its now abundant varieties appear to be the hardiest, and of these the one named Gloire de Versailles is perhaps the best. A large bed of it in the arboretum at Kew passed through the frosts of last January and February without more injury than the cutting back of the young herbaceous points of the branches; they were simply protected by spreading a layer of dry leaves 6 inches or 8 inches thick over the ground. With the advent of milder weather the plants broke freely into growth, and the bed is now a beautiful mass of rich blue flowers. C. azureus, which has paler flowers and smaller panicles, is a native of Mexico, but the genus is represented most abundantly in California. The easy production of varieties, as evidenced by the number sent out by Continental nurserymen, is due to the readiness with which they hybridise. Even in a state of nature it has been noticed by botanists that species growing near together are nearly always found to have their characters united in forms which no doubt owe their origin to cross-fertilisation by insects.

HYDRANGEAS AT KEW.

In addition to their showy blossoms, the Hydrangeas are especially valuable from the fact that they do not bloom till the majority of hardy shrubs are over. The common Hydrangea is known to everyone, but not so the variety Lindleyana, of which a coloured plate was issued with The Garden, December 1, last year. Of this there is a large bed at Kew filled with neat compact bushes about 2 feet high and plentifully furnished with blossoms, arranged, as in most of the species, in large flattened cymes. Unlike the common Hydrangea, whose head of blossoms consists almost entirely of large sterile flowers (for the small fertile ones are completely hidden by them), those of the variety Lindleyana are arranged in quite a different manner. In this the centre of the cyme consists of the small fertile blossoms, which are of a pleasing shade of blue, and the showiest part of the inflorescence, that is, the large sterile blooms, are arranged in a somewhat irregular manner around the outer portion of the head of blossoms. These sterile flowers are when first expanded nearly white, but they soon become more or less flushed with red, and some of them are particularly bright. In many of the blooms the rich colouring takes the form of an irregular band around the margin of each petal. As the last severe winter did not injure this Hydrangea to any extent, it must certainly have a place assigned it among the very best of the late summer and early autumn-flowering shrubs. Besides the varietal name of Lindleyana it is also at times met with under that of roseo-alba. Two or three plants of another beautiful and distinct form occur in the same bed at Kew. This is H. stellata rosea, which, though about the same height as the last, does not branch so freely, and consequently as a bush is less dense than the variety Lindleyana. The flowers are arranged in much the same manner, but the fertile ones are white, and the large sterile blooms greatly surpass those of H. Lindleyana in richness of colouring. When first expanded the blossoms are nearly white, then they become flushed with red, till finally they are entirely of a glowing crimson-lake slightly marbled in many instances with white. Owing to the different habit of this, there is not, of course, such a mass of bloom as Lindleyana produces; still, the colouring is so rich as to at once attract attention.

There are several other Hydrangeas in bloom, but some of them are not particularly showy. An exception must, however, be made in the case of the popular H. paniculata grandiflora, which is at Kew associated with the typical H. paniculata, so that their relative merits can be readily compared. H. paniculata itself is more robust than the other and equally free-blooming, but the number of large sterile blooms in a cluster is very much less than in the case of the variety grandiflora; hence a flowering bush is not nearly so showy as this last mentioned. The blossoms of H. paniculata grandiflora will in a sunny spot become flushed with red as they get old. The common Hydrangea is also in many cases wonderfully showy, and so is the variety mandschurica or cyanoclada, characterised by the blackish tint of the bark and leaf-stalks, especially on the young shoots. This last is often brought in quantity into Covent Garden Market during the season. One prominent feature in connection with the different Hydrangeas is that they can all be very readily struck from cuttings, put in a frame at any time during the growing season, and they grow away rapidly afterwards. They will strike well enough now, but if put in about midsummer will root in a few weeks, when they may be potted off and will soon become established in small pots, in which they may be wintered in a cold frame. H. P.

Flower Garden.

THE PERENNIAL GENTIANS.

If the genus Androsace may be considered to be the most alpine of all, the Gentians form of themselves a group of essentially mountain plants. It is true that some kinds of them are found on elevated ridges near the snow line, and that some kinds grow in marshy places on the low grounds, but the vast majority of these plants have their native habitat in the mountain regions of both hemispheres. Their flowers, which are of large size, sometimes very large for the dimensions of the plant, the richly coloured tints of their corollas, their graceful aspect and the architectural build of some species formed, ages ago, the subjects of enthusiastic descriptions and opened to many species of Gentian the garden gates of our forefathers. According to Paxton, Gentiana lutea was introduced into English gardens in the year 1596, while the date

of the introduction of G. acaulis is so remote, that all record of it has been lost. But it is not much earlier than the commencement of the present century, and especially after the year 1850, that the Gentians, no longer confined to botanic gardens, have been utilised for the embellishment of private gardens, flower beds, and rockwork, and it is entirely a result of the special culture of alpine plants that these brilliant



Vernal Gentian (Gentiana verna).

daughters of the mountains are now to be seen growing around our dwellings. For a long time lovers of alpine plants, who were at first few in number and uncertain and empirical in their treatment of these plants, grew them on small rockeries apologetically hidden in some remote corner of the garden. But ever since Messrs. Edouard André and Wm. Robinson gave the sanction of their high authority to the culture of these plants, which they advocated both in their writings and by practical example, the cultivators of alpine plants have taken courage, and now claim for their favourites the first and best position in gardens or parks of the highest pretensions.

The Gentians belong to the natural family of the Gentianaceæ, which is a well-marked one, comprising forty-nine genera, of which the genus Gentiana is by far the most important, as it contains nearly 100 species. These are scattered over the mountain regions of both hemispheres, the great majority of them being natives of the northern hemisphere, where they are found on the Alps, the Himalayas, in Siberia, on the mountains of N. America, and in the Arctic regions. Several species occur on the Andes of S. America, in Tasmania, Australia, and New Zealand. I do not know whether any species grow in Africa, except perhaps on the mountains of the Mediterranean region. They are, for the most part, perennial plants with fleshy roots which contain very bitter juices. Of annual Gentians there are less than thirty species, and the culture of these presents no great attraction to the great majority of amateurs. From an entirely cultural point of view, the perennial Gentians may be divided into four sections or groups as follows :—

Group I. Gentiana lutea.—Comprising the species whose roots are more or less stout, and which are of a tall-growing habit, and are suitable for furnishing borders as well as rockwork, or may be used as subjects for landscape gardening.

Group II. Gentiana acaulis.—Including low-growing species whose roots are not so stout as those of Group I., and which are better adapted for growing on rockwork, but are equally suitable for culture in the open ground, provided that a special compost is used to plant them in.

Group III. Gentiana verna.—Containing dwarf species with sessile flowers growing little above the level of the ground, and forming more or less dense and compact tufts of foliage. These should be grown on rockwork, or, with special treatment, may be cultivated in the open ground.

Group IV. Gentiana purpurea. — To this group belong those alpine species which are difficult of culture, and cannot be grown without some special knowledge and practical experience.

Group I.

Gentiana lutea (L.). — A tall-growing plant with an erect stem 3 feet to 4½ feet high, and sometimes taller than this. Leaves broad, large, oval, opposite, forming quite a bush near the ground, and sometimes from 14 inches to 16 inches long and from 6 inches to 8 inches broad, very much veined, and of a glaucescent green colour ; stem leaves arranged in tiers 10 inches to 12 inches apart, and diminishing in size as they approach the top of the stem. Flowers yellow, produced in clusters from the axils of the leaves, and forming a long erect spike with vacant intervals. Blooms from July to September. Its habit of growth is noble and majestic, its aspect is quite architectural, and everything relating to this fine species contributes to impart to it an air of greatness which induces the spectator to pronounce it, in the words of an English enthusiast, "a glorious plant." It is highly effective on rockwork and on the slopes of undulating ground in landscape gardens, and may be also advantageously planted as single specimens here and there in parks and pleasure grounds. On rockwork it requires a compost of good vegetable mould, leaf soil, and sand, and should be fully exposed to the sun. If planted in the open ground it should be in a deep, mellow, calcareous soil rich in humus. From the roots of this plant is made the liqueur or cordial commonly termed "Gentiane." The plant is propagated only by sowing the seed, and when once established it does not like to be disturbed from its position. In the alpine garden here we sow the seed in November in a cold frame, and the seedlings make their appearance in the following March and April. In May and June we prick them out under a cold frame, and in August we transfer the young plants to pots, in which they are kept as long as possible before they are sold or sent away. We have observed that if the roots of the young plants sustain any injury in the process of transplanting or potting, the growth of the plants will be checked or even seriously affected thereby. Gentiana lutea is found in the wild state on the calcareous mountains of Central and Southern Europe at an altitude of 500 mètres to 1000 mètres. Some hybrids of this and allied species are in cultivation.

G. alba, Muhl. (G. ochroleuca, Lims.). — An erect-growing, rigid, very glabrous plant, 12 inches to 16 inches high. Leaves lanceolate-oval, broad at the lower part of the stem and very narrow at the upper part. Flowers white, more or less dotted with yellow or green, and borne in a terminal head. Native of the mountain regions of the United States of America. Culture as for G. Pneumonanthe or G. asclepiadea. Rarely met with in cultivation.

G. Andrewsi (Griseb.).—A plant with an erect stem 8 inches to 10 inches high, furnished with opposite, lanceolate-oval, acuminate leaves. Flowers almost sessile and borne in terminal cymes ; corolla of a violet-blue colour, from 1½ inches to nearly 2 inches long, the divisions meeting at the apex in such a manner as to give the flower the appearance of an unexpanded flower-bud. Blooms in July and August. Found in moist places on mountains in the United States of America. There is a variety of it in cultivation which has white flowers. Culture as for G. Pneumonanthe.

G. angustifolia (Michaux).—Stems slight and flexible, from 12 inches to 16 inches high, furnished with linear, rigid leaves of a dark glistening green colour, and bearing from one to three funnel-shaped flowers of a sky-blue colour and 2 inches or less in length. A variety of it is in cultivation which has pure white or greenish flowers. Blooms in July and August. Native of moist forests in the United States of America. Culture as for G. Pneumonanthe. This species is rarely found in cultivation on the Continent, where G. Saponaria or G. cruciata is very often sold under the name of G. angustifolia.

G. Bigelowi (A. Gray).—This species is very closely allied to G. affinis. Leaves narrow, linear, opposite, furnishing a stem 12 inches to 16 inches high, the upper half of which is, in the blooming season, transformed into a long spike of flowers alternating with the leaves from the axils of which they are produced ; corolla of a violet colour, and in shape like a cylindrical tube terminating in a funnel with five lobes, which are oblong, acute, and ciliated at the edges. The flower-spike is rather like that of Campanula spicata. Blooms in July and August. Native of the Rocky Mountains from Colorado to New Mexico, at an altitude of 2000 mètres to 3000 mètres. Culture as for G. lutea.

G. Burseri, Lapeyr. (G. hybrida, Vill.).— A plant with a stout stem 6 inches to 8 inches high.



Gentiana affinis.

Radical leaves large, lanceolate-oval, very much veined (five or six veins). Flowers large, pale yellow, dotted with purple on the inside, sessile, and borne in clusters at the extremity of the stem and in the axils of the uppermost leaves. Blooms in June and July. Native of the alpine region of the Pyrenees. Culture as for G. lutea.

G. cruciata (L.).—Forms tufts of foliage of a cheerful green colour. Leaves broadly lanceolate-

oval, veined. Stem at first creeping, then rising erect to a height of 10 inches to 12 inches, and furnished with opposite lanceolate leaves. Flowers small, numerous, borne in terminal clusters; corolla sky-blue, with four oval acute divisions, which are of a paler colour on the outside. Blooms from June to August. Native of warm calcareous hills in the mountain regions of Central and Southern Europe, Asia Minor, and Siberia. Culture as for G. lutea; it likes limestone and full exposure to the sun.

G. decumbens, L. (G. adscendens, Pall.).—Stem erect, 12 inches to 16 inches high. Leaves lanceolate-linear, thick. Flowers numerous, of a fine blue colour, and borne in terminal spikes. Blooms from June to August. Native of Siberia at an altitude of 500 mètres to 1500 mètres. Culture as for G. lutea.

G. Fetisowi (Rgl. and Winkler).—Stem solitary, erect, 6 inches to 10 inches high, furnished with narrowly-lanceolate leaves. Flowers sessile, borne in a terminal cluster. Corolla tubular, with five spreading lobes, and of a dark violet-blue colour; tube of a light lilac colour on the outside. Blooms in May and June. Native of the mountains of Turkestan at an altitude of 1000 mètres to 2000 mètres. G. Olgæ (Rgl. and Schmalh.), a native of Siberia, comes very near this species. Culture as for G. lutea.

G. gelida (M. B.).—Stems prostrate at first, then ascending, 8 inches to 10 inches high, furnished with narrowly-lanceolate leaves, and bearing at their extremity a spike of pale yellow flowers with five oval lobes, which are not ciliated. Blooms in June and July. Native of the alpine regions of the Caucasus and Armenia. It requires a light, deep, cool soil, and full exposure to the sun, and does well on rockwork. This species is seldom met with in cultivation true to name, as G. septemfida, which has a general resemblance to it in habit and foliage, is very often substituted for it by plant-dealers.

G. Kesselringi (Rgl.).—Stems 8 inches high, bearing linear-lanceolate leaves, which have from three to five veins. Flowers white, borne in a closely-set terminal spike. Corolla tubular, swollen at the middle, and dotted with green on the inside. Blooms from May to July. Native of the alpine regions of Eastern Turkestan. Culture as for G. lutea.

G. macrophylla (Pall.).—Stem erect, 16 inches to 20 inches high. Radical leaves from 10 inches to 12 inches long; stem leaves smaller. Flowers blue, small, numerous, borne in closely-set terminal heads. This species comes very near G. cruciata, from which it is chiefly distinguished by the size and shape of its leaves, the divisions of the calyx, which are different in form and sometimes five in number (in G. cruciata always four), and lastly, by the lobes of the corolla standing erect instead of spreading out. Blooms in July and August. Culture as for G. lutea.

G. Olivieri (Griseb.).—Stem erect, 8 inches to 10 inches high. Radical leaves oblong, five-veined, stem leaves narrow. Flowers shortly stalked and borne in a loosely-set corymb; corolla dark blue, 2 inches or less in length. Blooms from June to August. Found in pastures in the mountain and sub-alpine regions of Asia Minor, Turkestan, and Songaria. Culture as for G. lutea.

G. asclepiadea, L. (Pneumonanthe asclepiadea, Schm.).—A species with long, slender stems from 20 inches to over 3 feet high, arching gracefully with the weight of flowers and foliage, and furnished with opposite, lanceolate-oval, much-veined, non-glistening leaves. Flowers blue, numerous, borne in a handsome terminal spike, in which the large dark blue corollas alternate with the leaves. Blooms from July to September. This species requires a shady or half-shady position and a moist, deep soil rich in humus, and may be grown either in borders or on rockwork. A white-flowered variety of it is very common in gardens. At Kew Gardens an immense bed of the blue and the white forms intermixed had a very fine effect. Multiplied by sowing the seed or by division. Found in the mountain regions of Central, Southern and Eastern Europe, also in the Caucasus and Asia Minor.

G. Pneumonanthe, L. (Pneumonanthe vulgaris, Schmidt).—Stems erect, slender, 8 inches to 10 inches high. Leaves all on the stem, opposite, narrowly linear. Flowers large, of an intense blue colour and borne in terminal spikes. Blooms from August to October. This fine species requires a cool, spongy, deep soil rich in humus. It dislikes lime and prefers sandy ground. It does remarkably well when planted on the margin of ponds or brooks. Multiplied by sowing the seed or by division. Native of marshy places in the mountain regions of Europe and the Caucasus.

G. affinis (Griseb.).—This is closely allied to the preceding species, from which it is distinguished by the oblong-obovate shape of its lower leaves and the lanceolate-acute form of the upper ones, which are wrinkled at the edges; also by its flowers being produced in fuller cymes and having narrower lobes and free anthers (in G. Pneumonanthe the anthers are connivent). Found in the Rocky Mountains, mountain regions of Hudson's Bay, &c., in N. America. Culture as for G. Pneumonanthe.

G. Saponaria, L. (G. Catesbæi, Walt.).—Stem erect, 12 inches to 14 inches high. Radical leaves lanceolate-oval, narrowed at the base; stem leaves narrow. Flowers almost sessile and borne in a terminal spike. Corolla of a light blue colour, with five erect, short, broad lobes, which are ciliated at the base. Blooms in October and November. Native of the United States of America and Canada. Culture as for G. Pneumonanthe.

G. Sceptrum (Griseb.).—A tall-growing species with an erect stem from 3 feet to over 4½ feet high. Leaves lanceolate-oblong, 2 inches to 2½ inches long, seven-veined, opposite and disposed along the stem in the same manner as the leaves of G. lutea. Flowers borne in axillary clusters of two or three flowers on the whole of the upper half of the stem. Corolla blue, with broadly oval lobes. Blooms in August and September. Found in Vancouver's Island, in the west of N. America. This species is very rarely met with in cultivation. Culture as for G. lutea, except that it requires a half-shady position and a rather peaty soil.

G. septemfida (Pall.).—Stem slight and slender, 8 inches to 12 inches high, plentifully furnished with opposite, oval-obtuse, five-veined leaves of a dark green colour. Flowers large, borne in a terminal cluster. Corolla dark blue, with five oval-acute lobes, which are ciliated at the base. Blooms from July to October. Native of the alpine and sub-alpine regions of the Caucasus and the mountains of Western and Northern Asia at an altitude of 1000 mètres to 3000 mètres. An excellent garden plant, requiring the same culture as G. lutea. The varieties of it which are known as cordifolia (Koch), glomerata (Rgl.), and latifolia (Rgl.) are also in cultivation.

G. Walujewi (Rgl. and Schmalh.).—Stem prostrate at first, then rising erect, 4 inches to 6 inches high. Radical leaves numerous, leathery, lanceolate, five to seven-veined, and 4 inches to nearly 6 inches long, by four-fifths of an inch to 1⅜ inches broad. Flowers white, borne in terminal branching spikes. Corolla 2 inches or less in length with a cylindrical tube and five lanceolate-elliptical acute lobes, which are longer than broad, and dotted with yellow or green on the inside. Blooms from July to September. Found on the mountains of Turkestan at an altitude of 1000 mètres to 3000 mètres. Culture as for G. lutea.

Group II.

G. acaulis (L.).—The old Gentiana acaulis of Linnæus no longer exists, botanically speaking. First, Villars, and, after him, Perrier and Songeon broke it up, stripped it bare, and abolished it. But it will be a very difficult matter to banish the name from horticultural catalogues, and for that reason I persist in giving it to that garden variety which is so plentifully grown in England under the name of Gentianella. Take one of these English Gentianellas and examine it well; then compare it with the different forms under which Gentiana acaulis is found in the wild state, and you will have great difficulty in seeing any resemblance between them. The Gentianella appears to come near (but only in a general way) the Gentiana angustifolia of Villars, which is grown in the flower-beds of the Grande-Chartreuse. It is a plant which, in the course of ages of garden culture, has undergone somewhat considerable modifications. Its flowers are now not absolutely stemless, but are borne on erect stems 4 inches to 6 inches high; its leaves are thick and broadly spathulate in shape, and its root-stock is stoloniferous to such a degree, that the plant has to be cut back every year to keep it from growing beyond the margins of flower-beds, to which it forms an edging, and invading the adjacent ground or walks. This, it must be understood, is what occurs in English gardens. In Mr. Robinson's garden at Gravetye Manor it has taken possession of whole grass plots, which it enamels in May and June with its superb blue flowers. Here, in France, it is easily grown by planting it in a compost of one-half humus or leaf-soil and one-half good vegetable mould, to which may be added a little sand. On rockwork, half or even fully exposed to the sun, it does wonderfully well, and, if care is taken to keep it free from wild or other plants of an encroaching character, it forms a valuable subject for planting on declivities or sloping ground, where its flowers are highly effective. It can be multiplied by means of offsets, but it is infinitely better to raise it from seed, and in doing this it should not be forgotten that the seeds of this group of Gentians are very tedious and, more especially, very capricious in germinating. I have sown seed of Gentiana acaulis, some of which did not germinate for twelve months, while others (which, I must say, were more recently gathered) germinated in a few weeks. The seedlings should be potted off as soon as possible and while they are very young. They will commence to flower in about three years from the time of sowing, rarely sooner. As for Gentiana angustifolia, G. alpina, G. Clusii, G. Kochiana, and G. dinarica, which are differentiated forms of the old Gentiana acaulis, they behave differently under cultivation, although all of them lend themselves, more or less, to the treatment mentioned above. The most difficult species to raise from seed and acclimatise is G. Kochiana, on account of the dislike which it has for lime. If the water with which it is watered contains any lime, this will either kill the plant or cause it to flag. However, the flowers of this species are the least attractive of all in their colour. In Belgium, England, and on the western coasts of France it succeeds pretty well.

The Gentianella is quite acclimatised in England, where it has modified its mode of life as well as its habit of growth, and withstands wonderfully well the damp, cold climate of the neighbourhood of London, where plants of its congeners, which have been imported from Switzerland or have been raised from seed, are grown with great difficulty under the same conditions. On the other hand, this plant has become anglicised to such a degree, that it cannot be grown on the Continent without a great deal of trouble; whereas plants raised from seeds of the alpine species succeed much better there.

The original G. acaulis now presents four or even five well-marked species, viz.:—

1. Gentiana angustifolia, Vill. (not Michx.).—A stoloniferous plant, emitting underground ramifications. Leaves linear-oblong, narrowing towards the base for a considerable length, and glistening on the upper surface. Divisions of calyx more or less spreading, oval, and abruptly contracted at the base. Flowers large, very handsome, of a fine deep sky-blue colour, and spotted on the throat with sprightly green. This is the handsomest species of the whole genus It flowers in May and June, and is found on rocky

and calcareous parts of the Alps at an altitude of 1000 mètres to 2000 mètres.

2. G. Clusii (Perr. and Song.).—This is distinguished by its lanceolate-acute, leathery leaves and by the lanceolate divisions of the calyx, which are pressed close against the corolla, are not contracted at the base, and are separated by acute sinuses. The flowers are of a fine dark blue colour and have no green spots on the throat. The plant blooms in May and June, and is found on calcareous rocks of the Alps and the Jura range at an altitude of 1500 mètres to 2000 mètres.

3. G. Kochiana (Perr. and Song.).—Leaves large, flat, thin, spreading, oval or broadly oblong, and of a light green colour. Divisions of calyx oblong, limp, more or less contracted at the base, and separated by truncate sinuses. Flowers of a violet-blue colour, marked on the throat with five spots of a blackish green colour. Blooms in May and June. Common in pastures on the granitic Alps.

4. G. alpina (Vill.). — Leaves small, of a sprightly green colour, glistening, curving inwards and imbricated, forming rosettes which incurve at about the middle part of their length. Stem almost wanting. Root-stock very stoloniferous. Flowers of a dark blue colour, smaller than those of the preceding species. Blooms in May and June. Found on the granitic Alps at an altitude of 2000 mètres to 3000 mètres; also on the Pyrenees and the Sierra Nevada. The two last-named species require a compost of one-third crushed granite, one-third heath soil, and one-third vegetable loam, and should be planted on rockwork half exposed to the sun.

5. G. dinarica (Beck.).—This is a form of G. acaulis with broad, thick leaves and erect, slender, almost cylindrical flowers of a dark blue colour. Found on the Alps of Southern and Eastern Austria.

Group III.

G. verna (L.).—A dwarf, cæspitose plant, with leaves gathered into rosettes. Leaves elliptical or lanceolate in shape, of a bright green colour, and turning red in autumn. Flowers of a bright sky-blue colour, white at the throat, and borne singly on short stems. Blooms from April to June. Found in the mountainous and sub-alpine regions of calcareous mountain-ranges in Central and Southern Europe and in the Caucasus. This is a very pretty little spring-flowering plant, which grows very well on rockwork or on sloping ground fully exposed to the sun, and is also used for edgings. It requires a calcareous soil rich in humus. We grow it here in a compost of one-third leaf-soil, one-third heath-soil, and one-third vegetable mould. There is a fine white-flowered variety, and another with flowers of a very dark blue colour. There is hardly any use in trying to multiply this species by dividing the tufts, as almost every attempt which has hitherto been made to do so has proved ineffectual. The only sure method is by sowing the seed either in autumn or early in spring. If the seed is fresh it soon germinates, but if it is not, one has sometimes to wait for twelve months before the seedlings make their appearance. G. verna often flowers again in the autumn. On the higher Alps, that is, at an altitude of more than 2000 mètres, instead of G. verna we find G. brachyphylla (Vill.), which ascends to a height of 3000 mètres above the sea-level, but grows only in granitic soils. This species is distinguished by its short, oval-rounded leaves, which are of a glaucescent green colour, and thicker than those of G. verna; but more especially by the tube of the corolla being much more slender than it is in that species. Rockwork; in a compost of heath-soil, finely-crushed granite, and vegetable mould, and in a position fully exposed to the sun.

G. angulosa (Bieb.).—Found on the Alps of Austria, the Carpathian Mountains, the Balkan range, Mount Scardo in Macedonia, the Caucasus, and the mountains of Asia Minor. This species is distinguished from G. verna chiefly by its larger flowers and by having the angles of the calyx more broadly winged. Culture as for G. verna.

G. pumila (Jacq.).—A native of the Tyrolese and Carinthian Alps, where it is found at an altitude of 2000 mètres to 3000 mètres. This is a very dwarf species with almost linear but thick leaves, forming compact rosettes, bearing almost sessile flowers, the corolla of which is deeply divided into five acute lobes, and is of a dark blue colour with a white throat. Blooms in June and July.

G. imbricata (Frœl.).—Found on the lofty ridges of the Eastern and granitic Alps, at an altitude of 2000 mètres to 3000 mètres. Leaves oval-rounded, closely crowded together, and imbricated. Flowers large, of a sky-blue colour, and borne on leafy stems 2 inches or less in height. Blooms in June and July. The plant forms handsome, compact, turf-like tufts of foliage.

G. bavarica (L.).—The finest species of this group of Gentians. A small, dwarf, tufted plant, with oval-oblong glistening leaves of a light green colour borne on numerous sterile branches, which are crowded closely together, and on branches bearing at their extremity a flower-stem 2 inches or 3 inches long. Flowers comparatively large, of a fine, bright, very pure sky-blue colour, and with a white throat; corolla divided into five lanceolate-oval lobes. Blooms from May to August. Found in elevated parts of the Alps at an altitude of 2000 mètres to 3000 mètres above the sea-level, and always in moist, cool, peaty spots in pastures or in stony places.

The last two species require a soil that is peaty or, at the very least, porous and cool, well drained, and capable of retaining an abundant supply of moisture, although it may be fully exposed to the sun. In the alpine garden here we grow them in pure Sphagnum Moss on a wall facing due south, but the plants which we raise for sale are grown in pots in a compost of Sphagnum, heath soil and sand.

G. pyrenaica (L.).—A very singular and handsome species, growing 2 inches or less high, and forming a small tuft of numerous narrow leaves of a dark green colour. Flowers of an azure-blue colour, greenish on the outside, pure white at the throat, and divided into five oval lobes, separated from one another by a triangular appendage, which is toothed at the edges. Blooms in May and June. Culture as for G. verna.

G. oregana (Engelm.).—A dwarf, cæspitose plant, with oval leaves and numerous large flowers of a fine blue colour, growing in clusters at the extremity of stems 4 inches to 8 inches high. Blooms in July and August. Culture as for G. verna.

G. ornata (Wall.).—Found in the alpine regions of the Himalayas. A small dwarf plant with linear-obtuse leaves and solitary sessile flowers of a fine blue colour, and borne on stems 2 inches or less in height.

In addition to the foregoing, there are some other species belonging to this group, natives of the Himalayas or other parts of the world, but those which I have just enumerated and briefly described will be amply sufficient for the majority of amateurs, and I may add that the omitted species are very little grown by anyone.

Group IV.

G. purpurea (L.).—A very curious and strikingly singular species. Stem rigid and erect, 6 inches to 20 inches in height. Leaves narrow, lanceolate-oblong, very much veined, glistening, and of a dark green colour. Flowers large, erect, borne in a terminal head and in axillary clusters at the upper part of the stem, thus forming a thick and closely-set spike; they are of a very dark brownish-red colour and emit a very agreeable scent. Blooms in August and September. Found in pastures on the granitic Alps, the Central Apennines, and the alpine regions of the Carpathian Mountains; also on the mountains of Norway. This is a difficult plant to grow. In our unfavourably dry climate here at Geneva we succeed in growing it in a compost of Sphagnum and heath soil, but, as in the case of Gentiana lutea, we have to be very careful not to break or injure the roots of the young plants, as any injury of this kind affects the plant to such a degree, that its death almost inevitably follows.

G. punctata (L.).—Found in the alpine region of the Alps, Carpathian Mountains, and Balkan range. It differs from the preceding species in having yellow flowers spotted with purple, elliptical leaves, and a campanulate calyx with nearly equal divisions (the calyx of G. purpurea being divided to its base on one side only like a spathe). Same culture. On the Pyrenees, instead of these two species, we find G. Burseri (De C.), which has large, erect, yellow flowers dotted on the inside; and on the Carpathian Mountains and the Austrian Alps we find G. pannonica (Scop.), which has dark red flowers dotted with black. Both these last-named species have the same habit of growth and the same form of inflorescence as G. purpurea, and are cultivated in the same manner. Gentiana Charpentieri (Thom.), G. Gaudiana (Thom.), and G. Thomasi (Gilab.) are hybrids from G. purpurea, G. punctata, and G. lutea, and are all cultivated in the same manner.

G. Frœlichi (Jan.).—Found on the Alps of Carniola and Carinthia at an altitude of 1800 mètres to 2500 mètres, and G. frigida (Haenke), found on the granitic formation in Styria at an altitude of 1800 mètres to 2800 mètres, are two species with erect stems 4 inches to 8 inches high, bearing one or two large, erect, campanulate flowers of a pale yellowish blue in the first-named species, and of a greenish white with bluish reflections on the outside in the last-named species. In G. Frœlichi the leaves are narrowly-lanceolate, almost linear, while in G. frigida they are broader and very long. These species are easily grown on rockwork in a compost of one-third Sphagnum one-third heath soil, and one-third good vegetable mould, in a position half exposed to the sun.

G. ciliata (L.).—This is one of the handsomest of the species that grow upon our mountains. Its flowers, which are of a pale sky-blue colour and appear in autumn, are among the treasures which we love to bring home with us in our autumn rambles. But the plant is a frightfully difficult one to grow, so that its culture is almost impossible. The seedlings of it which we have raised in the alpine garden here have only yielded flowers in the proportion of hardly 3 per cent. A heavy, compact soil, which is almost clayey, and full exposure to the sun are the conditions which appear to suit it.

In the course of last year we received seeds of a certain number of New Zealand and Australian Gentians, only one of which (G. saxosa, Forst.) has flowered. The other species appear to be of very slow growth. Gentiana saxosa is a very handsome little species with spathulate leaves, disposed in rosettes and of a fine cheerful green colour. The plant appears to come near G. acaulis. The flowers are numerous, white and borne in terminal umbels of four or five flowers: corolla divided into five oblong-lanceolate lobes. Blooms from June to August. It is a somewhat delicate species, requiring some protection during the winter in our climate. Our New Zealand correspondent who sent us the seed of these Gentians stated that all of them should be hardy at Geneva, but up to the present this appears to be doubtful. Next year, however, their behaviour will convince us one way or the other.—H. Correvon, in *Revue Horticole*.

Senecio Heritieri. — This tender plant is growing out of doors at Offington, Sussex, but will probably require protection during winter. The plant under notice is a very handsome specimen. The leaves in shape and size resemble those of a Ribes, but are covered on the under-side with a silvery pubescence. The flowers are arranged in large umbellate cymes and remind

one of Cineraria, the ray florets being white tipped with pale mauve and the disc florets deep purple with yellow anthers.—M.

JULY IN SOUTH DEVON.

During July rain has fallen to the amount of 2 73 inches on twelve days against 4·18 inches on nineteen days in the corresponding month of last year, the average fall for the last nineteen years being 2 80 inches. For the first seven months of the year the fall has amounted to 14·14 inches against 19·19 inches in 1894 and 14 04 inches in 1893. As regards sunshine, the month has not reached the average for July, which is 183 hours, 179 hours 10 minutes having been recorded, but the record for July, 1894, has been beaten by about 20 hours. From January 1 to August 1 1242 hours 30 minutes sunshine have been registered as compared with 1051 hours 40 minutes in 1894 and 1352 hours 40 minutes in 1893.

The mean average temperature 60·2° was 1·1° below the mean average for the last nineteen years. The lowest reading on the grass was 45° on the 5th, the highest in the screen being 70·7° on the 28th.

July was a more windy month than April, May or June, the total horizontal movement of the wind being 7433 miles, an average daily velocity of 239·8 miles. The greatest hourly velocity was recorded between 2 and 3 a.m. on the 24th, when a speed of 25 miles per hour was reached. On twenty-five days the direction of the wind has been from south to west.

In the garden the Lilies have throughout the month displayed their varied beauties, a stately L. giganteum over 9 feet in height, with thirteen flowers, being for a time the chief centre of attraction. This is a Lily that is not commonly grown, probably owing in a great measure to the fact that the bulb expends itself in flowering and that three or four years elapse before the offsets reach a flowering size. When well grown it is a striking object, associating pleasingly with the graceful foliage of the slender Bamboos and Arundinarias, the shining green of the large heart-shaped lower leaves being only less effective than the long creamy blossoms with their claret-coloured internal stains, which blossoms have the additional charm of possessing a delicious fragrance resembling vanilla. L. candidum from its associations, apart from its chaste loveliness, appeals to the heart more closely than any of its sisters of the Lily bed. From children we have known it, growing by the Jasmine-covered cottage window, blossoming in lines on either side of the path that led to the grey old sundial in the rectory garden, or standing, an emblem of purity, by the head of a little grave in the village churchyard. During the past month this Lily of the painters and the poets has surpassed itself, blooming, except in cases where the new Lily disease has been imported, profusely, the display being more than usually lengthened owing to the absence of high winds and rain to mar the snowy petals. L. excelsum (testaceum), said to be a hybrid between L. candidum and L. chalcedonicum, has carried a wealth of its soft buff flowers. L. pardalinum and L. canadense, the former a week earlier in bloom, on slender stems have borne their spotted, pendent blossoms, which swayed to every stray zephyr that invaded their sheltered retreat, where L. Humboldti has made a superb picture, bearing on tall stems numerous large flowers of orange-yellow flecked with spots of purple, while in the shade the vermilion of L. chalcedonicum, the most brilliantly-coloured Lily in existence, glowed from out a carpet of tufted Pansies.

Carnations have done well and have scarcely suffered at all from disease, one patch of white Cloves being a mass of bloom. Tigridia lilacea, T. grandiflora, T. pavonia, and T. g. alba have brightened a sunny border with their gorgeous, but short-lived blooms, which in the brilliance of their hues and fanciful mottling remind one rather of the floral display of the tropics than of the less emphatic colouring of the denizens of the English flower garden. A breadth of Salvia patens has clothed a broad bank with vivid blue which breaks along the edge into the grey foam of Gypsophila paniculata—flower-lace it is called by some. I saw the other day a very pretty combination for table decoration consisting of sprays of Salvia patens, yellow Paris Daisies, and Gypsophila. The blue and yellow formed a charming contrast, while the fairy-like tracery of Gypsophila gave a grace of form to the composition that even Maiden-hair would not have rivalled. The Chimney Campanulas (C. pyramidalis) have thrown up tall spires of bloom, both purple and white, some 5 feet high, one plant being of a lovely faint lavender colour. With these the dark-coloured herbaceous Phloxes make a striking contrast, Galega officinalis alba, a mass of white Pea-like blossoms, being also effective at the back of the border. Telekia speciosa I am rather disappointed with, and think that it might with advantage be relegated to the wild garden, where it would doubtless be effective. Œnothera Youngi and the Welsh Poppy (Meconopsis cambrica) have both filled their respective sites with bright yellow through the month, while amongst the annuals Coreopsis lanceolata and C. sanguinea contrasted their gold and brown with the dazzling scarlet of the Zinnias. All the plants of the beautiful Coreopsis grandiflora were lost during last winter, and the garden thus for this summer loses a valuable effect. The tuberous Begonias were perhaps never finer, and the drooping varieties having been carefully weeded out, show their bold flowers bravely. One of the most lovely flowers of the month, the Salpiglossis, has also flourished exceedingly, having produced in a slightly raised bed, over the verge of which fall the blossoms of the Ivy-leaved Geraniums Mme. Crousse and Souvenir de C. Turner, a profusion of many-tinted blooms wonderful in the arrangement of their colouring and reticulation. The Sweet Peas have been yielding baskets full of flowers daily, some of the newer kinds being especially decorative. Countess of Radnor, a bluish mauve, is one of the most effective. Yucca filamentosa on the rockery has thrown up flower-spikes of ivory-white bells that stand out well from the low-growing plants around. Handsome clumps of the Plume Poppy (Bocconia cordata) gave a new note of colour in the brownish yellow of their long panicles of inflorescence, and a large shrub of Spiræa Lindleyana has been a handsome object during its flowering season, though not so effective as its relative S. ariæfolia in general attractiveness, as its panicles of bloom are less freely produced and last a less time in perfection. In the wild garden the Lupines have been blooming a second time, and tall, 7-feet high spires of the Aconite have shot up amongst the perennial Sunflowers which have just commenced to expand their blossoms. Hollyhocks have been decidedly more successful this year than in previous seasons, and up to the present have shown but little sign of the disease that has of late years made their culture so difficult, no syringing with solutions of sulphide of potassium or permanganate of potash, which tend to keep the disease in check, having been necessary. Arundo conspicua, unharmed by the winter, has produced a large number of light waving plumes, and the glaucous foliage of Funkia Sieboldi has a pleasing effect in a partially open spot around which self-sown seedlings of blue Cornflower and the sweet-scented Tobacco plant (Nicotiana affinis) are now in bloom. On a high and almost perpendicular bank, clothed in the early spring with the blue of the lesser Periwinkle, large plants of Clematis Jackmani have intertwined their tendrils with the wiry stems of the former and are now a glow of rich purple on the green setting. The single white Macartney Rose that is planted against the pergola opened its first large and delicately fragrant blossoms on the last day of the month. The plant is in rude health, having braved the last winter without any protection, a proof that it does not possess the delicacy of constitution so often assigned to it. One note of regret must be sounded ere the chronicle of the month is complete. It is, that Romneya Coulteri, the pride of the garden in July, 1894, is no longer with us to delight us with the purity and perfume of its large crêpe-like flowers. The loss of this splendid Californian Poppy is the severest blow that has been dealt us by the prolonged frost of last winter. S. W. F.

Garden Flora.

PLATE 1028.

THE INDIAN OR SIKKIM YULAN.

(WITH A COLOURED PLATE OF MAGNOLIA CAMPBELLI.*)

The coloured plate is a faithful illustration of the rosy blossoms of this rare and beautiful Indian tree. The flowers were sent from the gardens at Fota Island, Cork, in April of the present year, and they gave one a foretaste of what may be expected when this noble species is more generally to be found amongst collections of flowering shrubs and trees. Fota is the residence of Mr. Smith Barry, who, together with Mr. Osborne (his gardener), is fond of rare and beautiful trees and shrubs of all kinds, and the noble masses of hardy Bamboos have long been a remarkable feature in that lovely and fertile domain. Cordyline australis, Benthamia fragifera, New Zealand Flax and many other rare plants from New Zealand, North India and other temperate regions here (as at Tresco Abbey, in the Scilly Isles) find a congenial home, and the flowering there of this Magnolia marks an epoch in the calendar of successes achieved there. Magnolia Campbelli has long been known, its home being among the outer ranges of the Sikkim Himalayas, where it was seen by Sir Joseph Hooker and others fifty or sixty years ago. In its native forests it attains a height of from 50 feet to 150 feet, at an altitude of from 8000 feet to 10,000 feet, and as thus seen, covered with its great rosy white Water Lily-like flowers, its beauty quite defies description. The species was introduced to Europe in the year 1868, and perhaps the finest specimen is at Lakelands, near Cork, which has attained to the height of a small tree, being at least 40 feet or 50 feet in height. This specimen was planted by the late Mr. William Crawford and is about twenty-five years old; it was the first plant to blossom in our western gardens, and a figure and description may be found in the *Botanical Magazine*, t. 6793. The great blossoms are white inside, the outer petals being rosy, shaded with crimson behind, as shown in Mr. Moon's drawing. The blooms are, moreover, delicately fragrant, and, like all Magnolia flowers, are admirably adapted for cutting and arranging in bowls of water, care, of course, being taken to cut bursting buds or half-opened flowers only. The plants at Lakelands are in a sheltered position, surrounded by trees and planted in a deep rich soil. I have also seen specimens elsewhere in Ireland, viz., at Castlewellan, Kilmacurragh, and it exists also at Kew and in other private and public gardens in England, but so far I believe that those growing at Lakelands and at Fota Island are the only plants that have hitherto blossomed. In sunny, woodland glades well sheltered this noble species might be expected to succeed along with its native congeners, the Sikkim Rhododendra and that most brilliant shrub Embothrium coccineum from S. America. So far as my own observations go, this species is perfectly hardy in sheltered, mild positions, but its flowers coming as they do early in the year are very apt to get scathed or browned by early spring frosts and winds. In a young state the plant grows most

* Drawn for The Garden by H. G. Moon from flowers sent from Fota, Cork, April 6, 1895. Lithographed and printed by Guillaume Severeyns.



MAGNOLIA CAMPBELLI

luxuriantly, and its leaves are so large as to produce quite a sub-tropical effect. In some cases it might be advisable to confine its roots in a limited space, as is now and then done with Fig trees or Bougainvilleas, so as to restrict its growth, and thus induce harder wood and possibly earlier flowering.

Mr. Osborne, gardener at Fota, sends the following notes regarding the flowering of this handsome Magnolia :—

This lovely Sikkim Magnolia is now in full flower (April 6) for the first time, although it has been planted here for many years and reached the height of 25 feet. It is planted in a nook sheltered from the north and east winds. The flowers, like those of other Magnolias, are terminal, the points of all main branches and every side twig being crowned with one large, slightly sweet-scented flower, which is from 6 inches to 8 inches in diameter. The colour of the outside of the flower is dark rose or crimson and lighter inside, with petals of great substance. I attribute its free flowering to the abnormally dry summer here of 1894. I say here because most other parts of the British Isles were suffering from too much rain, whilst all crops here were suffering from the want of it. F. W. B.

The Week's Work.

KITCHEN GARDEN.

Early Mushrooms.—The time has come for all those who desire Mushrooms, say at the beginning of November, to prepare the manure for making the first bed. Novices often err in using manure from grass-fed horses, such being of little use compared with that from corn-fed animals. See that the material is not thrown into a heap as collected, but spread out somewhat thinly in an open shed, where it can be turned over occasionally in order that it may partially dry and sweeten. When thrown together carelessly it often heats unduly before it is noticed. A large bed is not necessary for a start; therefore if droppings are scarce the compartment may be halved by placing a piece of board across it. When sufficient manure has been collected let it be thrown into a heap and allowed to remain undisturbed for a few days, after which it should be turned over every morning, always allowing the outside portions to come into the middle of the heap. When this treatment has dispelled the bulk of the steam, let it once more be mounded up and allowed to stand untouched for several days, when it may be wheeled in to form the bed. If it be found impossible to procure sufficient droppings by the required time, a fourth part dry Oak or Beech leaves may be added, also a barrow-load or so of sweet rough loam. Deep beds are not necessary so early in the season, shallow ones retaining sufficient heat even without the aid of fire-heat until the young Mushrooms appear, when a gentle warmth may be allowed in the hot-water pipes. In making the bed, do not throw on too much stuff at a time, or thorough firmness cannot be secured. If there is sufficient head-room for working, nothing beats treading the bed in the first place, beating it firmly with the back of a five-tined fork afterwards. The making completed, those who do not possess a bottom-heat thermometer must thrust in a testing stick. This must be examined occasionally, and when it is found that the heat has risen to its maximum, a quantity of fine soil, preferably loamy, should be prepared for surfacing. When the heat has declined to about 90°, spawning may take place, there being no fear in these first early shallow beds of any reaction. If spawned at this figure and immediately soiled down, the heat is preserved; whereas if a fall to 80° is allowed before spawning, the bed will frequently run down to 60°, and a considerable time elapse before young Mushrooms appear. After soiling and firming with the back of a spade, using a little warm water if it is at all dry, cover the bed with a moderate thickness of Oat straw if procurable, this being far better than hay refuse, which is so apt to become mouldy and smell, making the surface actually colder than if it were not covered at all. As no fire-heat will be necessary for a time, so neither will floor and wall dampings, these being commenced as soon as the pipes are warmed and a less moist atmosphere prevails. To insert the spawn I always use a flat-ended dibber; a sharp-pointed one is apt to leave a cavity under the spawn after it is pushed in. Some use no tool, but simply make a small hole 1½ inches deep with the hand and push in the spawn, which should be in pieces about the size of a pigeon's egg. Re-beating the surface is necessary when spawning is completed. It is a good plan to place the spawn in a box a few days before it is wanted and to subject it to the moist atmosphere of a stove or forcing house; it then breaks easily and operates sooner when put into the warm bed. I have known a few good early Mushrooms secured by breaking up, levelling and watering the soil of an old bed in the Melon house and inserting the spawn, afterwards covering with cross bars and mats or loose strawy material, but this cannot of course be done where the house is required for young plants for winter. Amateurs who have only a Melon or Cucumber frame may, after the fruit is cut, employ the same means to secure a few Mushrooms, furnishing extra bottom-heat by building up a lining of stable manure round the sides and ends of the frame.



The Willow Gentian (G. asclepiadea). (See p. 140.)

Winter Cucumbers.—It is now high time seed was sown to produce plants for yielding fruit during November and December. Some people prefer to sow a little later, but I think this is an evil, as if the plants, owing to fine weather and extra strong growth, should come into bearing a little sooner than is required, the fruit can easily be picked off in infancy and the plants allowed to strengthen themselves against the trying ordeal of winter cropping. Sion House or a good strain of the old Telegraph cannot be beaten for winter work, and the seed should be sown in small pots, not many seeds in one, and the plants afterwards potted off. Give them a light airy position near the roof glass, where red spider does not abound, as once get this pest on to the foliage of young winter Cucumbers they might as well be thrown away. If the house in which they are to fruit has had summer Cucumbers or Melons growing in it, a thorough cleansing must be given, well washing all woodwork with warm soapy water and coating the walls with lime-wash into which a little sulphur has been stirred. This last ingredient is important, as it not only aids in keeping spider in check, but also creates a healthy atmosphere. Plants which are now cropping and are to keep up a supply until the winter fruiters commence to bear must be well looked after, and as the summer declines the demand for salad will be lessened. These plants should be allowed to carry a moderate quantity of fruit only, and receive a good, rich top-dressing of loam and manure, followed by occasional drenchings of farmyard liquid. The seed for a batch of plants to fruit in January and February may be sown about the middle of September.

Salading.—If seed of various kinds of Lettuce, including the small, tender Cabbage variety All the Year Round, was sown three weeks ago as recommended, the plants will soon be fit for transplanting. These will afford a good supply from the end of October and through November, the secondary sowings making nice plants if well treated for putting into any spare frames or pits for winter protection. Give plenty of room to these late batches, as the more stocky the plants grow the better will they stand keen frost. When huddled together they become weakly and soft in growth, and are afterwards easily damaged by frost and wet. The present is a good time to make a sowing for plants to stand the winter in a small state, to be pricked out under sheltered walls and warm corners, and also for wintering in frames for transplanting in February. A second sowing for this purpose should be made the first week in September, especially in more southerly counties, as should the autumn be sunny and warm the first sown lot will sometimes get too large for the purpose. Nothing surpasses the old Brown Cos for hardiness and general excellence in spring. Where a Cabbage Lettuce is needed for spring use Daniels' Continuity may be sown with the above sort, this standing frost and wet better than most Cabbage varieties. It is, moreover, very crisp and juicy. The first sowing of Endive will now have produced plants fit for thinning out. Let this be done with a free hand, as nothing tends so much to weaken the seedlings as neglect in this matter. If another sowing is made now it will prevent the possibility of a blank in this salad in spring should the first raised batch run to seed. I would confine myself to the Batavian only at this sowing.

Cardoons.—The earliest transplanted of these will now be advanced in growth, and will need feeding to promote sturdy, well-developed heads. These are very free-rooting when healthy, and need abundant supplies of moisture, ordinary rains being quite insufficient for their wants. Go over the plants and remove any suckers that have started from the base and any rough, discoloured leaves, giving a couple of drenchings with farmyard liquid at intervals of a fortnight; or where this is not procurable, dress with guano, fish manure, or nitrate of soda, strict moderation being necessary in the case of the last, afterwards watering the fertiliser home.

French Beans.—Where time and labour can

be spared, the present is a good time to sow seed of some early growing variety for planting out in a frame for late picking. It will be best to sow in small pots, placing these in a fairly warm house until the plants are an inch high, when a cool frame and night protection will rapidly bring them to a fit size for transplanting. Let the compost be fairly rich, mixing some Mushroom manure with it, and allowing plenty of room between the plants. A little later on, say at the end of September, linings may be built up round the frame to afford the plants sufficient heat, and nightly covering with mats or bracken practised. Thus a supply of young tender pods may be had until sharp frost sets in. Late open-air sowings still in a young state should soon have a rough framework erected over and around them in order that on the approach of colder nights protection may be given.

Hardy green Colewort.—This must not be confounded with the ordinary Rosette form, being quite distinct and if anything more hardy, which is saying a good deal. If a sowing is made now, it will afford plants for yielding a capital lot of green heads in early spring after the Rosette form has been used. Any spare piece of ground from which late summer crops have been cleared will answer, no digging or preparation being necessary. Plant from a foot to 15 inches apart always, and until the plants become established, stir the ground between the rows with a five-tined fork and give a good dressing of artificial manure, to be washed in by the winter rains. Let the planting out of successional batches of the Rosette Colewort be proceeded with as soon as the plants are ready, nothing repaying care and labour better than this winter vegetable. Ordinary spring Cabbages for pricking into frames may now be sown, this being quite early enough if ungainly size and failure after lifting in spring are to be prevented.

Vegetable Marrows.—On healthy plants fruit should now be plentiful, that is, where cutting has been regular. When fruit is allowed to grow to a large size and mature on the plants, much of the vitality is lost and the quality of that cut for cooking affected. Those whose custom it is to grow Marrows on heaps of rank manure will this season have found out that it is not a good plan, as the amount of sunshine has been insufficient to consolidate growth; hence continuous grossness and barrenness have been the result, most of the fruit which did set turning yellow and falling off. Where fruiting plants have only a limited quantity of soil to root into, the watering-pot must be kept in use, as it is quite surprising how much root moisture Marrows will take; nothing surpasses farmyard liquid. Pen-y-byd (a small, round Marrow) is a capital kind, especially for late use. When cut in quite a young state its flavour is delicious.

Carrots.—Where young tender roots are in constant demand, another sowing of any of the Horn varieties may now be made, affording a warm, sheltered border and fairly rich soil. Use plenty of soot or wood ashes when preparing the bed, as wireworms are often more troublesome amongst autumn-sown Carrots than spring ones. The roots from this sowing should be fit for drawing by the middle of November, and as growth after that date will be slow, they will be useful for soups and flavouring right through the winter, being allowed to remain in the soil and protected during sharp weather by loose Bracken. If the ground is wanted for other purposes, Turnip-rooted Beet sown for early use may now be lifted and stored away in a very cool place—say behind a north wall. If laid in and covered with fine soil it will keep sound and plump for a long time.

J. Crawford.

FRUIT HOUSES.

Pot Vines.—The plants intended for early fruiting next season will now require more air and thorough ripening of the canes if required for early forcing. Growth being finished, more air and less moisture will be beneficial, and any shortening of the canes may now be done, keeping the plants on the dry side for a few days after the cutting down. If the Vines are well developed and the wood of a nice brown colour fire-heat may be dispensed with, though I do not advise placing the canes in the open for a little time, as we often get much rain at this season, causing a late growth. If the canes can be given glass shelter and freely exposed with top and bottom air, there will be less difficulty in ripening up the wood. Late growth may be assisted by fire-heat and plenty of ventilation at the same time, but to promote early ripening and to assist the growth to mature it is well to cease feeding. Sufficient moisture both at the roots and tops should be given to aid the plants in swelling up the buds for next season's fruiting. With canes in good condition less moisture will be required, but there should be no stint, and the plants treated thus will be in condition to place on a hard coal ash bottom under a wall in the open early in September, where they will get full sunshine, the canes being firmly secured to prevent twisting. In case of very wet weather it is advisable to place slates or boards over the pots to throw off excessive moisture. Young plants struck from eyes this season for cutting back next year will be growing freely, and will need generous treatment for a few weeks longer, giving liquid manure if the pots are full of roots and a warm temperature, syringing daily. This treatment should be continued till the end of September, when more air and less moisture will be necessary. It is not advisable to repot after this date, as there is not time for the plants to fill the pots with roots.

Early permanent Vines.—The work in this department since the crop was cleared has not been great, but with much sun, unless the rods were kept well syringed there will have been trouble with red spider and other pests. I do not intend to convey that the canes must be kept growing freely. Strong lateral growth after a certain period with early-forced Vines is not desirable, and by retaining the fully-developed foliage to absorb the sap, late growth is not encouraged, though the roots are fairly active. With a sudden change in the weather overhead syringing will not be necessary, and there should be no complaints of unripened wood. Now is the time for abundant ventilation, and the opportunity may now be taken to renew boilers which are defective and in a measure prepare for next year's forcing. Of course, to summer-fruiting Vines these remarks are not applicable, as fire-heat may be necessary for the next few weeks to ripen up the wood, at the same time giving all the air possible. Early Vines cleared of their crop some little time may now be assisted in maturing lateral growth by shortening back the shoots to about two thirds of their length; this will ripen up the back buds and allow more sunlight to enter the house. The same remarks apply to the terminal growths, which may have been allowed to grow freely. In wet weather it is well to draw up the sashes to prevent inside borders getting too much moisture, also to maintain a dry atmosphere. Should the borders be inside and out it is a good plan to cover the portion outside to throw off heavy rains. Though too much moisture tends to late growth there should be no drying of roots. To keep these moist it is a good plan to empty the tanks when there is a heavy rainfall; by doing this every few weeks the roots will be kept moist and active. Any Vines which may have got a touch of red spider or thrips may now be cleared of the pests by syringing, dressing with sulphur or tobacco water, and fumigating.

Later Grapes.—All late Grapes, no matter how long they require to be kept, should now be colouring freely, as bad finish means a lot of decay during the winter; good colour and finish give firm skin free of spot and disease. Hamburghs and Madresfield Court nearly ripe need every attention to keep the berries free of damp and spot. In rainy weather allow a free circulation of warmth through the pipes and give free ventilation also during cold nights. Do not allow the temperature to fall below 65°, at all times giving top air if drip can be avoided. Such varieties as Gros Colman need a long period to ripen, the colouring being deficient if not given plenty of air, warmth and light. In the case of fruit just turning, the bunches should be gone over and berries pressing hard against each other, also any small or stoneless berries, cut out. Muscats require even more care if wanted to hang, and being most valued in midwinter should be well finished, giving a higher temperature than advised for black kinds. In no case should the foliage be dense, as this prevents the fruit taking on that rich amber colour so much liked. Much may be done now to give additional colour by tying back large leaves or laterals and exposing to the light and sun.

Ripe Grapes.—With heavy rains there will be trouble in the way of cracking. Such varieties as Madresfield are very subject to crack, and the borders, if outside, should be covered without loss of time. I use corrugated zinc sheeting for the purpose, but any material may be used that will throw off heavy rains. It is well to place the material on rafters or supports not close down on the soil, as then air can reach the roots and growth is not arrested. Front air can always be admitted, and a chink on the back ventilators will maintain a free circulation, and in the case of the sashes running down over ripe bunches, temporary boards may be used so as to give air and yet exclude drip. I have used large sheets of rough glass on a few strips or supports, and by this means ventilation is always ample. In the case of ripe fruit the borders must not be kept too dry, as this causes shrivelling and does the roots much harm. A thorough watering should be given when absolutely necessary, doing the work early in the day so as to get the surface dry by nightfall. The surface-roots can be much better managed by giving a good mulch at the colouring period, this keeping the roots active. In light porous soils I have used partially dried cow manure as a mulch. The new roots soon lay hold of the cool manure. Means must also be taken to guard against wasps, which soon play sad havoc with ripe Grapes. If shading is used, let it be as thin as possible so as not to prevent free ventilation.

Top-dressing Vine borders.—In many cases it would be preferable to top-dress borders now instead of early in the year. By top-dressing I do not mean that large quantities of animal manure should be employed, but a portion of the old inert soil or manure should be removed and a layer of new material added. The fibrous roots will soon take to the new soil and push out in all directions. With Vines in a bad state and deficient of roots this surface-dressing is not advisable. For top-dressing, wood ashes, mortar rubble, and bones or bone-meal mixed with the soil are preferable to animal manures, and if the latter are used they should be in small quantities, or as a finish to the surface soil. New borders with recently planted Vines should not get too much moisture.

G. Wythes.

Orchard and Fruit Garden.

OPEN-AIR FIGS.

It would be interesting to learn how Fig trees generally growing out of doors stood the severe test of last January and February. Doubtless those growing in favoured counties, and which had been well looked after during the summer, would, with ordinary protection, by means of straw, Bracken, or garden mats, survive the frost which came upon the none too well-ripened wood. What about trees which, in addition to having no particular summer thinning, were not laid in to the wall in autumn and received no winter protection at all? I am afraid such will have fared badly. Two trees growing in a cottager's garden near here, and which occasionally bore a few nice fruit, were killed almost to the ground line, only a weak, puny shoot show-

ing itself here and there this summer. I know that even in Fig counties some of the fine old trees, occupying sheltered sunny corners in kitchen gardens, and which bore profitable crops fifteen or twenty years ago, have not of late received so much attention, and have actually been left in winter to take care of themselves, gardeners thinking that the uncertainty of the crop, caused by unripened wood, did not pay for any extra trouble. If, however, any of these old Fig trees have perished, it will be matter for regret, as, independent of their ornamental and interesting character, their fruits, even though few in number, could not be equalled for flavour and lusciousness by any grown under glass. In planting Figs out of doors, two most important points to be observed are perfect drainage and a confined root run. Neglect this, and gross wood, barrenness, and consequent disappointment are sure to follow. Neither must a rich larder be provided, a medium loam and ordinary garden soil in equal quantities suiting them best, with a free admixture of old mortar rubble as a corrective. A south or west corner must be selected, and the roots kept within bounds for the first few years at any rate by slates or slabs, the same being cemented together, one or two cavities being left at the bottom for the escape of water. A bottom slate is necessary to prevent the descent of tap roots. The nearer the surface the bulk even of the fibrous roots is the better. Figs, like all other fruit trees, being prone to make more shoots than can be duly exposed to the influence of sunlight and air, should be early disbudded, midsummer and autumn laying in of the wood being indispensable. Nothing responds more quickly to a surface mulch of old Mushroom manure than the roots of a Fig, colonies of fresh fibres soon running into it, these being further benefited by a top-dressing each spring of loam and lime rubbish. Fig trees even now-a-days would, I am confident, yield fairly remunerative crops in the open air if more attention were paid to cultural details, especially to that most important one—judicious thinning of the wood.

At the end of November provision must be made for protecting the trees from frost, nothing answering so well as the common Bracken, covering this over with ordinary garden mats. This ought not to be removed all at once in spring, but piecemeal.

In my earlier days I have seen good fruit gathered from bush trees grown in warm, well-drained beds in open, sunny positions in Essex. Two of the best I ever saw were put into very large pots, these being plunged in the ground, a trench afterwards being dug round, the pots broken with hammers and the roots liberated after the trees had become fruitful. As I stated before in these columns, the finest Brunswick and Brown Turkey Figs I ever saw grew in the garden at Sherringham Hall, on the Cromer coast, in Norfolk. These fine old trees were not trained formally, but allowed to ramble across the wall border to the path, the elbowed shoots in some instances having rooted into the soil, forming, as it were, trees of themselves needing only detaching from the parent. East Anglia generally has long been noted for its fine old Fig trees, some of the best being in gardens around Bury St. Edmunds. Perhaps Mr. D. T. Fish can tell us what condition they are now in and what the crops are like this season.

Notts. J. Crawford.

The Japanese Wineberry.—This Bramble (Rubus phœnicolasius) is at present laden with fruit. The plant is very ornamental, the foliage being handsome and distinct, the lower sides of the leaves almost white, much the colour of the undersides of the leafage of Bocconia cordata, while the branches are covered with a dark red pubescence, which extends to the exterior of the berry sheaths. This Wineberry is well worth growing for its attractive appearance alone, the sprays of fruit clusters with the individual fruits ranging in colour from the polished crimson of the ripe berries to the pale orange of those which the hairy red calyces have but just exposed being exceedingly decorative. The ripe fruit is much appreciated, its brisk flavour rendering it extremely pleasant to the palate. The other day I observed some of the fruit displayed for sale in a fruiterer's shop, and on inquiry found that it was selling readily and at a remunerative price, being preferred by many to Raspberries for dessert. The plant was introduced in 1877, but has not been widely cultivated. In my opinion it is well worth a trial both on account of its fruit and for its fine appearance. Here, the long shoots were killed by the last severe winter, but the bushes are now carrying a crop that quite puts the common Blackberry of the hedgerows into the shade.—S W. F., *Torquay.*

Pine Prince Albert.—This variety is of more than ordinary merit, and next to the Queen would be hard to beat either for general appearance or quality. It belongs to the same class as Black Jamaica, having dark purple leaves, which grow closely together in an upright form, even the outer leaves spreading but little. The fruit is conical, averaging from ten to twelve pips deep on healthy plants, of a pleasing bronzy yellow colour, and carrying a very small, neat crown. It is useful for growing with the ordinary batch of summer Queens, as it ripens a little later and thus keeps up a succession. The fruit may be kept for some time after it is ripe without losing either its colour or flavour. It should be given the warmest and lightest end of the Pine pit, and enjoys rather more bottom-heat than the Queens. —C. H. N.

Plum Dymond.—We do not hear or read of this Plum so much as one might expect, considering what a prolific and useful variety it is. Its large size and colour are likewise much in its favour. Like many other Plums, it is liable to make strong, rampant growth if planted in rich deep soil, barrenness for many years resulting. What it requires is a soil rather poor than otherwise, with a surface mulch to prevent evaporation in hot, dry summers. It then yields abundantly, soon after planting, and continues to do so annually. It is a favourite Plum in this locality both amongst market growers and farmers. It is seen in its best form on a south wall, the fruit here swelling to an immense size and laying on a bloom of great depth and beauty. All who want a large good Plum for cooking should plant Dymond. It makes a delicious preserve. —J. C., *Newark.*

Pear Jargonelle.—I think it was Mr. Young who last year spoke of the advantage of a cool season for ripening this well-known Pear. This season seems to have suited its wants, judging by the heavy crops of extra fine fruit the trees hereabouts are bearing both on walls and espaliers. I think the latter form of training suits the Jargonelle best, as the fruit, while escaping the baking influence of the sun which wall fruit gets, yet receives sufficient to swell it to a large size and to develop its flavour. Fruit from sunny walls in hot summers is likely to ripen too hastily, and be in consequence void of flavour. As Mr. Young said in his note, the Jargonelle cannot be easily beaten as an autumn Pear, so many people disliking the musky flavour present in Williams' Bon Chrétien.—J. C., *Newark.*

Planting out Pines.—The planting out of Pines in beds of soil is not, I think, so much practised as formerly; still, it has much to recommend it, if one may judge by the splendid fruit annually grown by Mr. Gleeson at The Warren House, Stanmore, Middlesex. For years this grower has been noted for his fine Pines, both of the Queen and Cayenne sections. Mr. Gleeson's plan is to pot up the suckers in the usual way in autumn, and to transfer them to the bed of soil when well rooted the following spring. The bed is arranged in tiers, in form similar to the stage of a greenhouse, which prevents the water from running to the lower or front part of the bed, as would be the case were it built in an ordinary slanting position. The plants are allowed plenty of room and firmly rammed. As growth proceeds and roots become abundant, stimulants are given, a favourite manure with him being guano. In autumn, rest is induced by gradually withholding water from the roots and lowering the general temperature. One advantage of planted-out Pines over those grown in pots is that during the resting season the roots are not so liable to suffer from excessive dryness, the mass of soil, though unwatered, retaining sufficient moisture to preserve the roots in a plump condition. On the other hand, it is questionable if the plants will show fruit quite so early in spring as the pot ones, the confined condition of the latter inducing an early start after extra bottom-heat is applied. It may be thought that planting out incurs more labour, but this I question, as I think a balance is effected by the less amount of water needed by the plants growing in beds. I am not sure, but I think the fine Pines grown at Castle Hill, Devon, are from plants growing in beds of soil without pots.—J. C.

PLANTING FRUIT TREES.

The heavy crops of Apples, Plums and other kinds of fruit this year appear to be inducing many to seriously think of planting fruit trees this autumn, and a great many inquiries have already been made as to where is the best place to purchase fruit trees. Such a question is more easily asked than answered, for the following reasons, viz., change of soil and situation. It is all very well to say to the inquirer, "get the trees from a firm of the highest repute." This is excellent advice, but something more is needed, as, for instance, whether they will succeed and rapidly develop into fruitful trees when bought from any particular firm and replanted again in the buyer's garden or fruit plantation. This should be ascertained prior to making any great expenditure, otherwise the results may prove very disappointing indeed, and the nurseryman or gardener receive unmerited blame. About nine years ago I had a quantity of fruit trees of different kinds from a well-known firm, and a fine, well-grown and fibrous-rooted lot they were, but none of them took properly to our soil and not one of them has done well. Many have had to be rooted out and replaced with others, yet trees from the same firm are a thorough success on land of a different character, which proves how careful we should be in selecting, more especially if fruit culture for commercial purposes is contemplated. My experience is that all fruit trees answer the best if planted in a soil of a somewhat similar nature to the one they have been accustomed to, and that soil distinctly opposite in character is best avoided. Another point of importance is the selection of the trees early in the season, and a little time and money spent now in visiting some of the best nurseries for that object will be amply repaid by having an early pick of all the finest trees. Those who order late have to put up with what the early purchaser has left, and though the trees may be only slightly inferior, they are not so uniformly good as those first ordered; not only so, but the order is executed at the earliest date possible that the trees can be moved with safety and before the great rush of orders flows in, which means in many cases more time to get up the trees properly and more care in packing, as the work has not to be performed so hurriedly as later on. In gardens where the supply of fruit is only required for

home consumption, a considerable variety is sometimes necessary to provide a supply of each kind for as long a period as possible, but for market the object is totally different, and I would strongly suggest a very limited number of sorts. What the market grower requires is fruit of large size, good appearance, and which will travel well, also varieties that are known to succeed and produce heavy crops freely in the immediate locality. By this means regular consignments in bulk of one or two sorts can be put on the market, and customers will be numerous for such produce.

Before planting any trees, however, it will be wise to see that the drainage of the land is good, for many an orchard that would otherwise be a source of profit is rendered of little or no value by the bad drainage and crippled state of the roots, arising from the stagnant water remaining about them. It is, comparatively speaking, useless to manure or prune carefully water-logged trees, for if the roots are in a bad, wet, and cold condition, good results are practically impossible. Again, there is the insect question to be considered in purchasing fruit trees. Supposing Apple trees are infested with American blight, the buyer will have considerable trouble and some expense in extirpating this scourge; therefore it will be well to have as much proof as possible that the trees are, and have been, entirely free from that enemy, thus ensuring a clean start and avoiding increased expenditure. Black Currants should also be examined to see if they are troubled with mite; this may be easily detected by the abnormal size of the buds, many of which can be discovered on the bushes in a dead condition, having never started into growth last spring. Once get a stock of Black Currants infested with this bud mite, it will mean great perseverance and labour to conquer it, otherwise it will ruin the trees. W. G. C.



Group of Gentiana acaulis. (*See* p. 140.)

GOOD RASPBERRIES.

It is with some diffidence that I venture an opposite opinion to that of so excellent a judge and grower as Mr. Wythes. But my experience of Superlative Raspberry has put me on the side of Mr. F. Bedford rather than on his (p. 93). That Superlative is an extraordinary cropper and a large fruit of firm texture and extremely handsome appearance I freely admit. But here, I think, its distinctive merits end. It much surprises me that Mr. Wythes should speak of its flavour as brisk and acid. I consider that it is extremely deficient in that acidity which is necessary for the best tarts and the best preserve, and that it will not bear comparison with the old Red Antwerp (to make that a standard) in this respect, although it is a pleasant fruit to eat fresh. Mine is a good natural Raspberry soil—the wild Raspberry abounding in the neighbourhood—and my plantation has received every possible attention in the way of preparation of the ground at first, keeping it firm and richly mulched, copiously watering in drought and so forth. A few years ago I was unwise enough (as I now think) to do away with the Red Antwerp, or a local variety of it, which before constituted my stock, and plant Superlative and Hornet. Of Hornet I will not now say more than this, that although a large, sweet, tender-fleshed fruit, it is not of full flavour and has not been a change for the better. My espalier row of Superlative has this summer been a sight worth seeing for size of berry and weight of crop; indeed, I thought of having it photographed. But "the proof of the pudding is in the eating," and it would be well if we judged many of our handsome modern fruits and vegetables by this homely, but supreme standard. I now sorely miss the sharp rich flavour of my old Raspberry in all cooked states. The authorities of my household pronounce Superlative flat and dull in taste, and the preserve is dead in colour and full of very large seeds. Again, when I speak of the extraordinary cropping qualities of Superlative, I am not in agreement with Mr. Wythes as to the extent of time during which it yields a full crop. I own that it sometimes gives a sprinkling of very late fruit, but my old Antwerp gave a full crop over more weeks than Superlative does. Mr. Wythes quotes a first-class hardy fruit grower on behalf of Superlative. Last year I posted some sprays of enormous fruit to a fruit grower in the eastern counties who makes a speciality of Raspberries, and is a man of much knowledge and judgment. He replied that in his experience these long or thimble-shaped Raspberries were always deficient in flavour, and that he much preferred the round-berried kind he already grew.

I should like to add a word upon the cultivation of Raspberries. When lecturing, during the last three years, upon cottage gardening I have always advised the espalier method. This mode of culture I have advocated and practised myself, because it is tidy and economical of space. But I have now come to the conclusion that it is unscientific. It ties the stools down too long to the same ground. All plants which make their natural increase by stolons, runners, or similar "travelling" processes, are greedy of and greatly benefited by entirely fresh ground. I tried the experiment last year of leaving the strongest of the canes which had come up irregularly and too far from the espalier wires to be tied in, and the fruit on these has been most marked, being finer and more abundant than on canes of the older stools, quite as much finer as the fruit of one or two-year-old Strawberry runners is than that of older plants. Where it can easily be practised I believe the cultivation of the canes as annuals, or rather biennials, would be advantageous. Another point is this: that though a little—and it is but a little—is gained in size of fruit by shortening back the canes, much is lost in weight and duration of crop. Superlative, for example, will produce fine berries right up to the points of the canes if left full length.—G. H. Engleheart.

—— Mr. Wythes' experience and authority among fruits are so great, that it needs considerable courage to differ from him in these matters. Still I have no hesitation in placing Baumforth's Seedling several points ahead of Superlative or any other known Raspberry, and in declaring that were I limited to one variety, Baumforth's Seedling should be that one. I should also state that I have not grown Superlative to anything like the same extent as Baumforth's Seedling. But I have seen and tasted it in good condition in several localities, but not once equal in size, colour, flavour, and form to Baumforth's Seedling as grown for dessert and preserving in quantity by myself. I do not understand Mr. Wythes to say that Superlative matches Baumforth's Seedling in flavour. But if this very skilful grower really means this, one is tempted to slightly alter his pointed question to Mr. Bedford thus: "Has Mr. Wythes got the true Baumforth's Seedling, as I cannot agree with his comparisons as to flavour?" Mr. Wythes will also pardon me if I appropriate his parting eulogium over Superlative and place it to the credit of Baumforth's Seedling thus: "If the long time it crops is taken into account, I consider it the very best Raspberry grown. Given good culture and not allowed to remain too long in one place, it makes grand growth and gives very fine fruit." If I might venture to add to this encomium, it would be to say that the growth, alike in the manner and the amount of it, in Baumforth's Seedling, and the fruit alike in bulk, character,



Gentiana algida.

and quality are as near perfection as we have yet attained among Raspberries.—D. T. F.

—— At p. 93 Mr. Wythes asks if I have Superlative true. There would be no excuse for having it otherwise, as it is distinct from all other Raspberries. I quite agree with Mr. Wythes that soil has much to do with the growth and flavour of fruits, and a dry root run increases acidity in other fruits than Raspberries. No doubt in a dry season like the present has been I have a great advantage over Mr. Wythes, as in the strong holding soil the drought was a blessing, and I had no occasion to resort to watering, which as a rule does more harm than good. Here this season Baumforth's Seedling was three days earlier than Superlative and both are still giving a good quantity of fruit. The superior flavour of Baumforth's here has been remarked by many. —F. Bedford, *Straffan*.

Fruit notes from The Hendre, Monmouth.—A year or so ago reference was made to the new and unique fruit garden made at The Hendre, near Monmouth, by Mr. T. Coomber, the able gardener to Lord Llangattock. As then stated in The Garden, the major portion is covered with fine-meshed wire netting, supported by strong iron columns, which effectually excludes birds and permits the fruit to be gathered at any time without the usual inconvenience experienced under ordinary nets. The soil is a heavy red loam, in which fruit trees of all kinds apparently succeed admirably. Strawberries, Mr. Coomber informed me, had been extra large and good, especially Noble. Currants were loaded with fruit, the best blacks being Lee's Prolific, Ogden's and Champion; amongst reds, Raby Castle, Grape and Dutch were remarkably fine; in white varieties, the White Dutch was the most prolific and best. Raspberries were really splendid, but I think Superlative was the best of all, for though not so sweet as some other varieties, it more than compensates for any lack of flavour by the heavy crop and enormous berries. As a rule Pears are not good in this portion of the west of England, but the popular proprietor of The Hendre has no cause for complaint, as most of the trees are producing fair average crops. Pitmaston Duchess, Marie Louise and many others are bearing heavy crops of fine fruit on the walls. Apples are particularly fine and well coloured; a few of the most conspicuous are Peasgood's Nonsuch, Frogmore Prolific, very large and highly coloured; Lane's Prince Albert, Ecklinville Seedling, Cox's Orange Pippin, Red Astrachan, Irish Peach, Lord Suffield and Cellini; each of these was producing excellent crops of clean and perfect fruit. Cherries grown as bush trees appeared in prime order proving how well some varieties will succeed in that form. Belle Magnifique and Morello were carrying fine crops of fruit; most of the other sorts had been cleared of their crops. In the houses devoted to fruit, Grapes were first-class, especially Black Hamburgh and Lady Downe's; Muscats had fair-sized bunches with large bold berries of good colour. Peaches in the late houses promised well for late supplies, but perhaps the best fruit on the place is the Pines. It is seldom one can see such magnificent plants and fruit; they alone will pay anyone interested to visit this well-managed and well-kept garden.—W. G. C

The Newtown Pippin *v.* Cox's Orange Pippin.—Mr. H. Hendricks (p. 59) protests against the statement of "W. G. C." that the flavour of the above Apple is "only slightly behind Cox's Orange," and considers such verdict unjust. I think that many will be inclined to think that "W. G. C." errs, if anything, on the side of leniency to the Newtown Pippin. Personally, I hold that the flavour of that Apple is a good deal more than slightly behind that of Cox's Orange Pippin. It may be, as your correspondent hints, that the fruit that I and others have tasted were not genuine Newtowns; be that as it may, none of them—and I have sampled many—approached the flavour of Cox's Orange when in perfection. It is unlikely that the best specimens of Cox's Orange would be exported to New York, as West-end fruiterers are always on the look-out for such, which command a ready sale at prices that are remunerative to the grower and shopkeeper alike. I know for a fact that some exceptional examples weighing 9 ozs. apiece were retailed in 1893 for 8d. each.—S. W. F.

Ferns.

CRESTED PTERISES.

Many of the crested and tasselled varieties of Pteris are still among the most popular for decoration. Although I have frequently heard them referred to as monstrosities by those who prefer the normal forms, it is certain that they are generally admired and very extensively grown, new varieties being eagerly sought after. Of Pterises we have such a number of varied forms, that it would seem almost impossible to find another quite distinct variety. One of the latest additions, and one which will be sure to find general favour, is Pteris cretica Wimsetti. In all other crested forms of cretica and serrulata the basal portion of the pinnæ is contracted rather than otherwise, the multifid growths taking the form of a branching crest or a dense terminal tassel. The distinctive character of P. c. Wimsetti is that, in addition to the terminal crest, each pinnule is broad towards the base and cut down into irregular segments, these in some instances being again lightly crested. These and the terminal crests being very light, the fronds stand erect. Like all of the cretica type, it is of free growth, forming a most elegant plant for decoration, and will be sure to become popular. Of other crested forms of cretica, nobilis is one of the most distinct. The fronds grow quite erect and are broadly crested. Even from the first tiny fronds of seedlings it is easily identified by the broad crests. There is a variegated form of somewhat similar habit. The ordinary form of cretica cristata is also very popular. There are several slight variations of this, that with the broadest pinnæ being the most useful. All the crested forms of cretica differ from those of serrulata in having broad flat crests instead of the finely cut, dense tufted tassels so often seen in serrulata. Of recent additions to P. serrulata, gracilis multiceps is worthy of note. This has very slender drooping fronds, the long narrow pinnæ each terminated by a tuft of finely-cut multifid growths. The fronds hang over and completely cover the pots. To grow it successfully, it requires to be elevated either by standing the pots on pedestals or suspending them. Pteris ser. cristata compacta and densa are both useful varieties, the latter forming very dense terminal tassels. In this as in several other varieties of serrulata the abnormal growths will continue to develop in the old fronds. Of the tall growing sorts that known as the Chiswick variety is one of the best. In P. serrulata gloriosa we have another distinct form.

There are now several distinct varieties of P. tremula, Smithiana being the most densely crested; it makes a beautiful plant, but owing to the continual growth of the multifid fronds they are very tender and brittle, which has prevented this pretty Fern from becoming so popular as was anticipated when it was first distributed. P. tremula elegans is another pretty variety. Instead of the erect tufted growth of the former this has drooping fronds, the pinnæ being much contracted, each terminated by a light crest, the fronds terminating in a broader branching tassel. Pteris reginæ cristata, of which a good coloured plate is given in Schneider's "Book of Choice Ferns," should be included, it being one of the most distinct of recent additions to crested Pterises.

Almost all the crested Ferns may be raised from spores, and although occasionally a good deal of variation will be found, yet, as a rule, they are reproduced fairly true. As most varieties deteriorate with age, it is advisable to grow others for succession. It is a mistake to suppose that repotting should be confined to any season of the year. Young plants may be potted at any time after the pots are well filled with roots. I do not recommend overpotting, but Ferns—more especially the free-growing Pterises—are often kept in too small pots and starved. Where it is necessary to limit the size of pots, liquid manure or any of the artificial fertilisers may be used frequently, but not too strong. This will materially increase the size of the fronds, and favour the further development of the multified growths. A good rich loamy compost will be found to suit all the free-growing Pterises better than peat, and plenty of daylight is quite as essential to Ferns as it is to flowering plants. A. H.

CRESTED FERNS.

There are very few distinct crested varieties of the Maiden-hair Fern, considering the number of seedlings raised. The most recent addition is Adiantum versaillense; this has rather short, erect-growing fronds, which terminate in a corymbose crest. It makes a very pretty plant, and I find it is easily raised from spores. A. cuneatum grandiceps is perhaps the most popular of the crested Adiantums; this also comes true from spores, and to grow it successfully the pots should be suspended, as the long drooping fronds are borne down by the tufts of multifid growths, and these can only finish off properly where they have plenty of space and light. I have seen a crested variety of A. elegans, but I am not yet able to say if this will prove a useful variety. A. incisum multifidum is the only other crested variety of any note. Of Aspleniums we have nothing remarkable in crested forms; this is probably owing to most of this genus being propagated from the bulbs produced on the fronds. Among seedlings of A. nidus I have seen some with slightly crested fronds, but they grow out as the plants advance. A. hemionites palmatum is the most distinctly crested that I am acquainted with in this genus. A. Drueryi (a seedling from A. Baptisti) is an interesting variety with irregularly broadened and twisted pinnæ. Of the hardy species there are numerous varieties, especially among the Athyrium group.

Of the Davallias we have only two; these are D. Mariesi cristata and D. elegans polydactyla. If these were more frequently raised from spores instead of dividing the rhizomes, we should probably get more varieties, besides which seedlings make much prettier plants. I have seen several plants of Lomaria gibba cristata, but it seems very difficult to propagate. I have never known a batch of seedlings to be raised, although fertile fronds are produced. Lomaria discolor bipinnatifida may sometimes be raised true from spores, though a good portion will revert to the normal form. The crested Doodias are more prolific, of which D. aspera multifida is the prettiest, the red-tinted young fronds being particularly attractive. Of crested gold and silver Ferns there are several distinct varieties. Gymnogramma chrysophylla grandiceps and Parsonsi are the best of the golden, and G. Wettenhalliana the best silver. These are easily raised from spores, but they vary a good deal in form, and in Wettenhalliana the colour of the farina or powder varies also, in some being quite silvery white and in others sulphur coloured. The Gymnogrammas also vary with age; while in a young state they may be only lightly crested, the second or third year they

may form dense masses of multifid growths. This occurs more when the plants are confined to small pots.

Among the Nephrolepises we have some very pretty varieties, foremost amongst which is N. davallioides furcans. When grown in a suspended basket or pot and treated liberally it grows freely. Another of more recent introduction is N. d. multiceps; in this the pinnæ are narrower and more forked than in furcans and the fronds terminate in a branching tassel, which is sometimes very dense. N. plumosa must also be included. This has rather narrow fronds, which are borne down by a heavy branching tuft of multifid growth.

Microlepia hirta cristata is a most elegant Fern, just sufficiently tasselled to add to the beauty of the graceful normal form. This is often seen as a large specimen, but it is much prettier as a smaller plant. Grown in loamy soil and well exposed to the light the fronds are of a soft pale green. Plants of this require to be broken up before the crowns get too thick. The same also applies to the Nephrolepises; they all make much finer fronds and are altogether more elegant when grown from single crowns, and if done before they get pot-bound they will suffer very little from being disturbed provided it is done carefully. Woodwardia radicans cristata is rare, but very pretty. I have seen a few plants which have been raised from spores, but it is very difficult to get.

Others might be added, but those referred to include all the most useful except those belonging to our British Ferns, and these are too numerous to include in this article. H.



Gentiana thibetica (syn., G. macrophylla). Engraved for The Garden *from a photograph sent by Miss Willmott, Warley Place, Essex.*

Orchids.

Ionopsids.

This is a small genus of epiphytal Orchids found in various parts of South America and the West Indies. They are small-growing plants, seldom exceeding about 6 inches in height and rather difficult to cultivate. As with all these small-growing Orchids, it is principally in the atmospheric treatment that we go wrong. It is easy enough to find a suitable roothold for the plants, and heat and moisture can be regulated almost at will, but there is still something wanting in our artificial climate. There is very little doubt that plants growing in their native habitat derive a good deal of advantage from the proximity of trees and other larger vegetation, though in what way it is difficult to say. Again, the moisture arising from decaying leaves and from the earth itself, the continual change of air and other climatic conditions, all help to maintain the health of the plants, and none of these can be successfully imitated in our Orchid houses. It is obviously impossible then to serve them exactly aright in the atmospheric treatment. With regard to the roots, they are very easily surfeited by anything in the way of compost, the plants seeming to lack the power of pushing them through even a thin layer of compressible material. The best growths of Ionopsids I have ever seen were on quite bare blocks of teak, these being sunk into pots filled with crocks, the latter being surfaced with Sphagnum. This kept up a certain degree of moisture about the roots always, and I know that for five or six years the plants succeeded well. Even with this treatment a time comes when the blocks decay and the plants have to be transferred to a new piece, and that probably means a check to the plants, from which they seldom recover. But even supposing the blocks lasted longer, I believe the plants would soon lose their vigour; certainly they would not be so good after six or seven years as they were the first few seasons after being imported. Here again is another item of mismanagement. The plants, fresh from their natural home and with all the innate vigour about them, push up strong spikes with dozens of flowers on each out of all proportion to the size of the bulbs. These are all allowed to come to perfection, and not only this, but kept on the plants until they fade. The next year the same thing occurs, and before the plants have had time to establish themselves they are literally worn out with flowering. I would not advise the entire suppression of the spikes, but would either limit their number or the amount of flowers on each to what the plants could safely carry, and should remove these after being a few days open, the pretty branching panicles of bloom being very useful for many purposes for which cut flowers are in request. This gives them a chance to establish themselves in their new home, be it in a pot or on a block. Once get a block, for instance, covered with roots, and we are in a fair way to keeping the plants healthy for a few years at least. The little growths as they form must have individual attention in the way of fixing, so that the roots can get a hold, they being apt to get loose, making the plants look untidy and rendering healthy growth impossible. Not that every one will want tying or pegging down, but they must be carefully watched and a little attention given where it is seen to be necessary. These seemingly unimportant and small details will make all the difference between successful culture and the reverse. With regard to temperature, Ionopsids like a nice genial heat, and while often recommended as cool house Orchids, I have never been able to make anything of them in a house such as suits the coolest Odontoglots. Still, too much heat is equally disadvantageous, and the happy medium is what must be aimed at. Such an one as suits the Mexican Lælias, but with less sun and more atmospheric moisture, will answer best, and they must not be dried at the roots even in winter. They are very apt to be attacked by mealy bug, and this must be kept under by frequent cleaning. Newly-imported plants often have these insects about them, so that they must be well sponged before being taken to the houses at all. A good deal of confusion exists in the nomenclature of these plants, and not many really distinct species are known. Those most generally cultivated are

I. paniculata, a beautiful small-flowering Brazilian kind with blush-white flowers, with a purple blotch on the lip, and

I. utricularioides, a kind with pink and white flowers from Jamaica. Many of the others are simply varieties of these two species, and an importation of either usually contains a number of differing tints of colour. They are hardly Orchids for beginners, for reasons stated above, but for amateurs who have been successful with other genera they are a very pretty and interesting family. R. C. H.

Cypripedium Hookeræ. — Although the flowers are somewhat small, this Burmese species is well worth a place on account of its beautifully marked foliage. This is very deep green, with irregular lines and spots of light yellow. It produces a one-flowered scape, the sepals and petals being yellowish with a green centre to the former, the latter marked on the edge and points with purple. The pouch is small and brownish green. This was introduced in 1862, and is easily grown if given plenty of water at the root and a shady position in a warm house.

Lælio-Cattleya elegans gigantea.—I have recently seen several fine varieties of this Orchid, but one bearing this name is the largest flower I have come across. It measures 8 inches across, and the petals are of that bright rosy white so attractive in Cattleyas and Lælias; the sepals similar in ground colour, lightly spotted with lilac-red. The lip is deeper in colour and has the front lobe of a rich purple-crimson, shading to white at the throat and several lines of violet. The many varieties of this Orchid thrive well under the usual treatment recommended for Cattleyas, and keep up a long succession of their splendid and elegant flowers. The type is a native of Brazil, introduced to Europe by a Belgian Orchid grower in 1847.

Saccolabium Blumei Russellianum.—This beautiful form of S. Blumei has the habit of the type, but longer racemes, the strongest sometimes branching at the points. The blossoms are very densely set upon these, and are similar in form to those of the type. The upper segments are

spotted with bright rose, the front lobe of the lip being magenta. It is not unusual for strong plants of this variety to throw spikes 18 inches and upwards in length, and when in full beauty these are magnificent subjects for exhibition. This was named after the late Mr. J. Russell, of Falkirk, with whom it first flowered. Saccolabiums require a strong moist heat with plenty of sunshine and as much air as can be given consistent with a high temperature. Small plants are best grown in wooden baskets suspended from the roof, giving a compost of clean Sphagnum and charcoal over good drainage. Larger specimens may be arranged on the central stages, but they must be kept in a good light, or but few flowers will be produced. They require abundance of water at the roots as long as they are growing freely, and while at rest, although they need a greatly diminished supply the utmost care is necessary that they do not remain dry for any length of time. The plants may be lightly dewed overhead while growing freely, but care is necessary not to overdo this.—R.

BRASSIAS.

Amateurs on the look-out for easily cultivated and free-flowering Orchids could hardly pick a more suitable genus than Brassias, for not only are they very beautiful when in flower, but they are not at all fastidious in their requirements, and, moreover, of that quaint and singular form that delights most Orchid lovers. About a score of species are known to botanists, and these inhabit various parts of Brazil, the West Indies, and Mexico. They are all evergreen pseudo-bulbous epiphytes, botanically resembling Oncidiums, but easily distinguished from that genus by the elongated segments and the absence of the excrescence on the lip. The best way to grow Brassias is in pots, and these may be of fairly large size in comparison with the plants, these being usually very free rooting, and, moreover, disliking much or frequent disturbance. Good peat and moss kept in a proper condition by a liberal admixture of crocks and charcoal will grow them well, and good drainage is essential to their well-being. They are not much troubled with insects, and ordinary care will keep them right in this respect. During the time they are in active growth they will require a great amount of moisture at the roots, when the pots are full of them, they taking it almost daily. Frequent and copious overhead syringings may also be indulged in without fear if the compost and drainage are right. While at rest less is of course required, but they like a greater quantity than most pseudo-bulbous kinds, and should not be in a lower temperature than about 55° if it can be avoided. Under this treatment they grow very rapidly, small plants soon making good specimens, while back breaks taken off and started on their own account in a couple of seasons make nice little plants that will flower well at the proper season. Any plants that get too large may be divided by cutting through the rhizomes, potting up into as many separate pots as are needed and watering carefully until the roots are moving freely. The best time for all these cultural operations is in the early spring, the plants then having all the best of the growing season to recoup their lost energy before the winter season is on them. The blossoms of all of them last a long while on the plants, those of B. Lanceana especially keeping until they quite turn colour before they begin to wither. Perhaps the best half-dozen species in existence are

B. antherotes, a strong-growing, free-flowering and very ornamental Orchid introduced from Ecuador in 1879. The blossoms are produced on long stout spikes from the base of the pseudo-bulb, and each bears a good many flowers 6 inches or more across. The sepals and petals are deep golden-yellow when fully developed, with deep purple blotches at the base, lip also yellow, spotted with chocolate-brown and a reddish crest.

B. Gireoudiana is another fine bold-growing Orchid, producing in May and June its long racemes of peculiar flowers. The segments are much elongated, yellow spotted with red, the lip narrow and similar in colour. This likes a very strong heat while growing and is a native of Costa Rica.

B. Lanceana macrostachya is a beautiful form of this species, sometimes met with under the name of Lawrenceana, from which it differs materially, the sepals of the latter not being so elongated as in the former, the spots also disposed differently. The sepals and petals are bright golden yellow with large spots of reddish brown about the base, while the lip is wholly yellow, narrow, and frilled on the edges.

B. maculata is a very old Orchid, having been in cultivation since 1806. It varies a good deal in shape and colour, and is the species upon which the genus was founded by Robert Brown. It produces its flowers freely in early summer, the typical form having sepals and petals shorter than most other kinds, greenish yellow, more or less spotted with brown or purple. The lip is white with purple spots. This old plant is a native of Jamaica.

B. verrucosa is a very attractive and beautiful plant, which flowers at various times during the spring and summer. The long racemes bear from twelve to eighteen flowers, these being large with whitish sepals and petals, spotted with very dark brown or black. The lip is pure white in ground colour, with many bright green warty spots. A native of Guatemala; introduced in 1838.

B. Wrayæ is also a native of Guatemala, and although sometimes classed as a variety of B. maculata, is possibly better known as a distinct kind. The flowers vary a good deal in colour, some of the better forms being nearly pure white with a few spots of purple about the base of the petals, sepals and lip Other forms are greenish with indistinct markings of brown. H. R.

Læ'lia autumnalis Arnoldiana.—A pretty form of this useful Orchid has flowered under this name, but whether it is the correct name or not I am not sure. The plants, in a very bad state, were obtained at a sale of Orchids, and this is the only one that has flowered. It has medium-sized flowers with rosy purple sepals and petals and a nicely coloured lip, the front deep crimson with radiating purple lines and pure white side lobes. It is apparently a weak grower, but this may be due to the unhealthy state of the plants.—R.

Dendrobium Dearei.—This useful Dendrobium was introduced from the Philippine Islands as recently as 1882, and quickly found its way into almost every collection of any size. It is a fairly good grower with erect stems about 2 feet in length, each bearing a few leaves on the upper portion. It is very free-blooming, the blossoms occurring near the top of the bulbs, each being about 2 inches across, pure white excepting the lip, which has a light green throat. The hottest and moistest place in the East India house should be given it while making its growth, but after this is complete it should be kept at rest by withholding heat and moisture. It dislikes a large pot or a lot of material about its small twining roots, but will usually be satisfactory in a very small receptacle with the usual peat and Moss mixture.

Galeandra Devoniana.—This is well worth growing on account of its beauty and the length of time the flowers last in good condition. It is an old species in cultivation, having been introduced from the banks of the Rio Negro in 1839. Although said to grow to a height of 6 feet or 8 feet in its native habitat, it probably never reaches more than half that height under cultivation. It produces erect, slender, leafy stems, from the apex of which the flower-scapes proceed. The blossoms are singular in form and have darkish purple sepals and petals, with a light green edge; these are thrown back and the lip is spreading in front, whitish, with a great many lines and streaks of purple. The plant is epiphytal naturally, but thrives under cultivation with what may be termed a semi-terrestrial compost. Good peat, with a little of the best fibrous loam and plenty of chopped Sphagnum and potsherds, will grow it as well as anything, but the chief difficulty will be found in keeping thrips and red spider in check. These insects seem to find out Galeandras before they touch any other Orchids growing in the same house, and unless repeated fumigations and spongings are resorted to, healthy growth is impossible. Besides this, constant fumigation is not good for any Orchids, and unless very carefully done, the remedy may prove as bad as the disease. A constantly moist atmosphere with a sufficiency of ammonia in it is the most likely one to induce healthy growth in this Orchid. The heat of the East India house suits it best while making its growth, and when this is finished it may be removed to a cooler, more airy structure and the water supply at the roots diminished.

Habenaria Susannæ. — Amongst several Orchids of more than common interest in flower now at Kew this is perhaps the most noteworthy. The genus Habenaria has been brought a good deal into notice during the last few years, and several new and beautiful species have been added to our collections; in some respects this is the most remarkable. The stem is from 1½ feet to 2½ feet high, bearing curious leaves, whose bases clasp the stem, and which are shaped like the spathes of some Aroids. The flowers are borne at the top, and number two or three to each stem. The diameter of each is just over 2 inches, and the whole flower is white, the lip, however, being of a purer shade than the outer segments. The lip is of a very curious structure; it is three-lobed, the middle lobe being a tongue-shaped blade 1¼ inches long; the side lobes are much broader and larger, and whilst the inner margin of each is entire, the outer ones are cut into deep, narrow teeth, almost into a fringe; the base of the lip contracts into a long green spur. The large rectangular column has two prominent decurved horns. The species obtained a first-class certificate from the Royal Horticultural Society about a year ago, having been shown by Messrs. Sander and Co. The Habenarias are terrestrial Orchids, and should be grown in a compost of loam and peat fibre, Sphagnum, and finely broken potsherds. After the flowers are past the stems gradually decay, and water should be gradually withheld. H. Susannæ requires a mild stove temperature. The species appears to be widely spread in the East, being found on the southern slopes of the Himalayas, Malay Archipelago, &c.—B.

THE ROCK GARDEN.

XIII.

The two last weeks of July have been accompanied by somewhat colder weather, cloudy days, and abundance of rain. In rock gardens everywhere the glorious colours of summer flowers are already beginning to fade away, and bright flowers blooming at this time of the year are a welcome boon to all who like to see their rock gardens gay with colour when mountain flowers generally are past their best.

Dwarf Rock Plants Flowering Late in July.

Erpetion reniforme, the pretty little Australian Violet, is among the choicest things blooming at this season. In cold northern districts it does not always stand the winter, but in the southern counties it does well in most places, and its charming blue and white flowers, each scarcely more than 2 inches high and springing from a carpet of bright green reniform leaves, are very attractive. Peaty soil and a position at least partly shaded seem to suit it best.

Another dwarf rock plant still flowering most profusely at present throughout the southern counties is Androsace lanuginosa, described so often in the columns of The Garden that further comment on its beauty is needless. Thymes generally have finished blooming for the season, but the pretty little Thymus azureus is still flowering profusely, and its flowers are shown off to greater advantage by the dense carpet of foliage beneath them. For rocky steps and similar positions few plants are more adapted. Dianthus alpinus flowered early in June, but it is at present blooming a second time, not only at Exeter, but in several rock gardens near the south coast, and a more handsome rock plant it would be difficult to find. Dryas lanata, too, is still showy with its cream-coloured blossoms, though its congeners, Dryas octopetala and Dryas Drummondi, ceased flowering several weeks ago. It does not seem to spread so rapidly as the last-named varieties, and well deserves a good place in the rock garden. Sedum monstrosum is now in full bloom and its cymes of yellow flowers are showy, but the plant is interesting also when not in flower, on account of the peculiar Cockscomb-like appearance of its crowded foliage. When this Sedum has been grown for several years in the same place it is apt to lose its compact appearance and become somewhat ragged. It is advisable, therefore, to strike cuttings (which root very freely) and replant with young plants occasionally. Polygonum vaccinifolium, which is now opening its pink flowers, arranged in long, compact racemes, is a most useful rock plant, and is never seen to better advantage than when growing downward over a rocky slope or hanging over the entrance to a cave or rocky recess. Unfortunately, it is not evergreen and does not form its young leaves till rather late in spring, but for this very reason it is admirably adapted for being associated with spring-flowering bulbs, which would look bright and gay when the Polygonum would be dormant. Hieracium albidum flowers later here than its congeners mentioned in previous notes, and its very pale sulphur-yellow flowers are certainly very distinct and attractive just now. Saxifraga mutata is now at its best. I find it does well in a damp, partly shaded position. It has large leaves and throws up numerous flower-spikes a foot or more in height. The individual flowers are pale yellow, with darker centre. Veronica corymbosa, with its handsome racemes of blue flowers always looks best in masses, and should be in every rock garden.

Tall and Medium-sized Rock Plants Flowering Late in July.

Under this section I would like to mention two excellent rock shrubs, viz., Hedysarum multijugum and Notospartium Carmichaeliæ. The former has been mentioned in these columns before, but it is now flowering for a second time and looking as gay as ever. The Notospartium cannot be too highly recommended, and in Messrs. Veitch's rockwork at Exeter two very fine specimens were in bloom at the end of July. It is remarkable that although last winter not only the bronze Broom (Genista Andreana), but also the common native Brooms were killed wholesale everywhere by the severe frost, this pink Broom of New Zealand has not only escaped, but has flowered more profusely than ever, and its delicate pink blossoms were simply delightful. Notospartium Carmichaeliæ is, of course, not a plant to be associated with small alpines, but for bold and at the same time graceful effect as a single specimen among the rocks or in connection with the taller vegetation forming the background of the rock garden few plants could be more deserving of a prominent place. A very desirable rock plant of medium size, *i.e.*, about 18 inches to 2 feet in height, is Dracocephalum Ruprechti. It forms a very handsome bush, of elegant habit, and continues in flower for several weeks. The leaves are linear or lanceolate and the flowers are of considerable size, most abundantly produced, and of a showy lilac colour. Anacampseros Borderi is not so graceful a plant as the former, but is well adapted for bold effects on the top of a large rock. It forms a somewhat rigid bush not unlike Sedum macrophyllum in appearance, and bears numerous corymbs of dark purplish red flowers. It flourishes best in a dry, sunny position. Coronilla varia, also now blooming, is a graceful plant in spite of its spreading propensities. For quickly fringing large masses of rocks or dry banks it is excellent, especially when it grows downwards and spreads its rosy flowers over the stones, but it must be kept at a good distance from small alpines, which it would quickly smother by its rapid growth.

Of tall perennials suitable for backgrounds I will mention Veronica verticillata, which has long racemes of white flowers on erect stems; Dracocephalum speciosum, with mauve flowers; Heliopsis scabra, Helenium Bolanderi and Helianthus of sorts, all with yellow flowers; Monarda fistulosa, purple; Aconitum napellus tricolor, blue and white; and Chrysanthemum latifolium, white. To plant a coarse-growing and fast-spreading plant like the last named into the rock garden itself would of course be a very great mistake, as it would quickly smother everything else, but in a background of trees and shrubs not in, but near a rock garden it might with advantage be used for covering the ground on large bare spots where little else would grow, and thus be effective when seen from a distance.

Exeter. F. W. Meyer.

(To be continued.)

Fruit and Vegetable Crops.

SOUTHERN.

The Hoo, Welwyn, Herts.—Apples a good average crop. Plums good. Pears very good. Cherries extra. Peaches and Nectarines average. Apricots under. Strawberries very good. Small fruits very heavy crops, and the trees have been remarkably free from both green and black fly.

The early Potatoes in this neighbourhood have been very good in quantity and quality, although the outlook at first was anything but promising. —C. E. Martin.

Dropmore.—Here in the South Bucks district the fruit crops generally are up to the average. Most kinds of Apples are cropping well (and in some instances too well) on orchard trees, and would be better if considerably thinned. We had a heavy crop of Blenheims last year, and the trees are rather thin this season, but abundant in the neighbourhood. Other kinds cropping heavily are Devonshire Quarrenden, King of the Pippins, Cox's Orange Pippin, Worcester Pearmain, Fearn's Pippin, Dutch Mignonne, Sturmer Pippin, Wellington, and Ribston Pippin. Of bush trees on the Paradise stock Lord Grosvenor always crops heavily and is the best early kitchen Apple. Grenadier is a close companion, and others are Warner's King, Ecklinville Seedling, Lord Derby, Lane's Prince Albert, Potts' Seedling, Stone's Apple, Cox's Pomona, Cox's Orange Pippin, New Hawthornden and Worcester Pearmain. Notwithstanding the period of extreme drought, Apple trees here have made good and clean growths, and the fruits seem almost larger than usual for so early in the season. The severe winter had apparently no injurious effect on fruit trees of any kind. Pears are a very thin crop this year; of many varieties, Williams' Bon Chrétien and Marie Louise are the only ones bearing a fair crop. Orchard Cherries have been a rather under-average crop. Of several kinds, Bigarreau carried the heaviest crops, and wall trees of all kinds were very good and cropped heavily. The last remark also applies to Peaches and Nectarines, which look remarkably well and have made nice growth and kept remarkably free from insect pests. I gathered ripe fruits of Waterloo on July 6. Bush fruits have been plentiful and good. Strawberries good, season rather shorter than usual owing to the dry weather. Nuts of all kinds abundant. There is a fair average crop of Plums this year.—C. Herrin.

Grenehurst Gardens, Dorking.—Strawberries were a most prolific crop. I only grow two sorts, viz., Sir Joseph Paxton for main crop, and Eleanor for late work. I find no other sort to equal them for all purposes on this heavy soil. In the spring of the year I heavily mulch them with half rotten manure, and the latter part of April I give them a dressing of salt, taking great care that the salt does not touch the foliage. This season and 1893 have been the driest that I ever remember, and yet they have been the two best Strawberry seasons with me. Raspberries suffered very much during the last severe winter, and I lost more than half my canes, but the dry summer has suited them and they are promising some very nice canes for next season. The canes which were left are carrying a good crop. Morello Cherries have cropped splendidly, the fruit large and of good colour. All bush fruits are an excellent crop. Apples also are an excellent crop. Pears are a very poor crop. Quinces are promising favourably. Plums are only half a crop. Peaches were never better. All the Peaches are grown out of doors on a south wall 85 yards long and 14 feet high, and the trees, with few exceptions, are all loaded with fruit. Apricots do not do well with me, and I have now ceased to grow them.

All vegetables have suffered very much this summer owing to the continued dry weather, but since the rain a fortnight ago everything is growing at a rapid rate. Potatoes with me have suffered owing to the long spell of dry weather, and the early sorts are a very poor crop. I hope the late ones will turn out better, the rain, I think, having come just in time to save them.—W. Shepherd.

Brambletye, Sussex.—The fruit crops in this neighbourhood are very good, notwithstanding the long spell of hot dry weather we have passed through. Apples promise to be a heavy crop and of good quality. The following varieties are bearing heavily and are seemingly suitable for planting in this district: Alfriston, Bismarck, Bramley's Seedling, Wiltshire Defiance, Hawthornden, Hanwell Souring, Lord Grosvenor, Lord Suffield, D. T. Fish, Cox's Orange Pippin, Blenheim Orange, Dumelow's Seedling, Flower of Kent, Worcester Pearmain, Oslin, Keswick Codlin, Lane's Prince Albert, Warner's King and many others. Pears on most trees are rather a thin crop. Standard Plums in orchard are bearing heavily, especially such varieties as Rivers' Early Prolific, Dymond and Victoria. Upon the wall trees the best are Coe's Golden Drop, Golden Esperen, Early Transparent Gage, Bryanston Gage, Kirke's and Jefferson. Damsons are an average crop. Peaches and Nectarines are plentiful, and have had to be heavily thinned. Dessert Cherries have been abundant and the trees wonderfully free from black fly. Morellos are a plentiful crop, but the fruits are rather smaller than they usually are here. Black, Red and White Currants were an exceptionally heavy crop. I think I have never seen a heavier crop of Gooseberries, and all the sorts were equally good. Glad to say the bushes have been quite free from caterpillar. Raspberries were plentiful, but small, and had a very short season owing to the hot weather. Strawberries

were an extra heavy crop, but I had to keep the beds well watered.

The vegetable crops suffered very much through the long-continued drought, but everything has improved wonderfully during the last fortnight. The early Potatoes were very fine; the later crops are looking well and I have seen no signs of disease as yet.—George F. Glen.

Knebworth, Stevenage, Herts.—The prospects of the fruit crops in this neighbourhood are on the whole extremely good. Apples and Pears are fully up to, if not slightly above, the average in many places. Now that the rains have fallen copiously after the long drought, and if genial weather follows, both the size and quality of the fruit will be much enhanced. Of stone fruits, Peaches and Apricots are above the average, and in size and quality likely to be good; Plums and Cherries barely up to the average. Bush fruits of all kinds are above the average and of excellent quality, though on the lighter and drier soils the fruit is small in size, from the want of moisture at the roots. Strawberries were heavy crops and of excellent quality, but the long-continued drought shortened the season of gathering. The severe frosts of February did little damage, on the whole, to fruit trees. Peaches and Apricots had the unripened tips of the shoots badly nipped, and a few immature shoots here and there in the body of the trees killed, but, as the abundant crops of fruit show, the general fruitfulness of the trees has been affected but little by the long-continued severity of the zero frosts. It is more among the ornamental evergreen trees and shrubs that the severity of the frost has told its tale.

The long-continued drought, now happily broken, has affected much the early and mid-season crops of vegetables. Through that cause both bulk and quality have been much diminished. Indeed, I have no recollection of a season when it has been more difficult to keep up the several supplies of the different vegetables needed in private establishments. Now that the long drought has come to an end, the later crops of Peas and Beans of various kinds, Cauliflowers, Cabbages, the Brassicas generally, Carrots and Turnips, and late Potatoes are likely to be abundant and good. The heavy showers of rain we are experiencing have, unfortunately, started the late crop of Potatoes in the fields into a second growth, which must to a certain degree affect their quality.—J. Kipling.

MR. A. F. BARRON.

Your article in The Garden of last week on Mr. Barron, I hope, will draw out a full statement of the reasons why the council is parting with him. It will be a national loss if Mr. Barron is actually driven from the post of gardener-in-chief of the Royal Horticultural Society's Experimental Grounds, Chiswick.

There is much dissatisfaction all over the country at the prospect of losing Mr. Barron's valuable services, and, further, there is a talk amongst some of the Fellows of withdrawing their subscriptions. The question people are asking is, why do the council want to get rid of a gentleman in whom the horticultural world has such unbounded confidence, and who has at least ten good honest years' work in him, backed by the experience of thirty years' entire responsibility of the society's gardens, wherein he has rendered such signal services in the able and uncompromising manner in which he has conducted the experimental trials at Chiswick, gaining for the R.H.S. a world-wide reputation. Your remark is well timed that Mr. Barron, "of all connected with the society, has best deserved the confidence of all interested in the society and its work," and so apparently thought the council a year ago, judging from the following, which appeared in the council's report in the R.H.S. Journal of August, 1894, that "the society's general work of scientific experiment and investigation, and of the practical trial of various plants, has been going on steadily at Chiswick under the superintendence of Mr. Barron. Trials have been made of 48 varieties of Onions, 63 of Peas, 104 of Strawberries, 68 of new Potatoes, 50 of Tomatoes, 23 of Celery, 20 of Runner Beans and 24 of Endive. In the floral department 400 varieties of Carnations, 70 Pinks, 500 Pæonies, as well as many varieties of Phloxes, Cannas, Sweet Peas, Violas and Irises have been tried. Reports founded on the work of these committees will be found in the society's journal, vol. xvi., parts 2 and 3, now issued." Those of us who have done clearing-up work of this sort on our own account can appreciate the herculean labours of the gardener-in-chief in bringing important trials (as above recorded) to a successful issue. The work on Carnations, Pæonies and Phloxes alone would have driven an ordinary man mad. Work of this sort needs a peculiarly constituted mind rarely to be met with, besides immense experience. The council cannot be in their right minds to act as they are doing; they cannot replace such a man. If they were wise in their generation they would associate with Mr. Barron a good man, who in the course of the ten years named might be able to take up his work, but they might have to change such a man many times before they hit on the one with the capacity, patience and dogged perseverance needed for such a post. Then again, the man who is responsible for these trials and who prepares the reports is the gardener-in-chief, and as such has hitherto signed all such reports; but a new departure of a significant character takes place in reports just referred to. Mr. Barron's name does not appear, contrary to what has been the custom hitherto. Is the council aware that this omission is a serious drawback to the value of the reports in vol. xvi.? Mr. Barron's name attached to reports has been our guarantee for the genuineness of the trials made at Chiswick. We knew, associated with his name, they were free from favouritism and done with extraordinary care and accuracy, an accuracy almost unknown in Chiswick Gardens before General Scott installed Mr. Barron as gardener-in-chief. The committees are important factors by giving authority to trials, but what is the value of the work of three or four hours compared with that of the gardener-in-chief, who has spent days, and perhaps weeks, with book in hand, and has matured experience of the subject, and feels his responsibility in assisting the committees? Mr. W. Marshall, chairman of the floral committee, and member of the Chiswick Garden committee, I am sure, is the last man to claim more for his committees when at Chiswick than confirming previously prepared work, not that Mr. Barron ever pushes his conclusions on a committee, but all the same he has done the work for the committee and prepared the reports. The departure in omitting Mr. Barron's name looks as if 117, Victoria Street wished an undue credit for the work on these reports, by omitting the honoured name of Mr. Barron. The Victoria Street department's share of the work must have been merely clerical. Should the services of Mr. Barron not be retained at Chiswick, the gardener-in-chief, whoever he is, must have a free hand, get credit for his work, and feel his responsibility and sign all his reports, otherwise the Fellows had better look upon him as a mere cipher, retained for the glorification of someone else. The council will do well to look to this, or the Fellows may exercise their rights at the general meetings. I think the society is drifting into bad ways, which I fear will be worse than any of the many bad ways it has fallen into during the last fifty years. Each time it has fallen into bad repute it has been found more difficult than before to get it on its legs again. The council cannot at present, or indeed at any time, afford to bring itself into conflict with public opinion.

The present council reminds me of the Pharaoh of old who knew not Joseph. I will, therefore, remind them of the time when the name of the R.H.S. stunk in the nostrils of horticulturists and was a by-word amongst men. Flower shows would at that period have been impossible but for the personal influence of Mr. Barron. Old exhibitors whom he induced to exhibit were wont to say: "Yes; we do so out of respect to you." For this alone Mr. Barron should have our gratitude and be treated as the best friend the society has had since the death of the Prince Consort.

Many are the reports afloat as to the reasons of the council in parting with Mr. Barron. I will deal with three. The first: The council feel, it is said, that more scientific work should be done at Chiswick. And why not? The fault is their own; it is simply a question of engaging scientific men. Formerly we had a scientific director; then a botanical director. Why not reinstate these offices, or one of them, and get a young man from the laboratory of Sir J. B. Lawes and Sir J. H. Gilbert as scientific director. Hire a field and let him carry out experiments as to the value of different manures suitable for gardens, and set a house apart at Chiswick to experiment with manures for plants in pots. Anyone who remembers the experiments of Sir J. H. Gilbert with Grasses at the gardens of the R.H.S. can testify that Mr. Barron gave the utmost attention to the experiments and rendered valuable assistance. If this meets the eye of Sir J. B. Lawes or Sir J. H. Gilbert, they may give a testimonial worth reading on the subject of this letter. The second report is that certain members of council have an itching to become amateur co-operative nurserymen, and why not? There is plenty of land to be had cheap enough, but I hope the council will not play with the Fellows' money and dishonour Chiswick Gardens by growing plants for sale at 2d. per pot. We do not want Chiswick to bring in a revenue, that comes from the subscriptions, and all we ask as Fellows is that the council spend our money carefully and wisely. The latest financial report of the disbursement of moneys I have of the society is August, 1894. I find that 117, Victoria Street and Drill Hall managed to spend £1875 5s. 5d. This is too much for our income. Chiswick spends £1624 15s. 1d., while the produce of the garden realised £404 9s. 2d. Considering the acreage and the important work done at Chiswick the allowance is simply starvation. Some of the money should be taken from Victoria Street and given to Chiswick, which is the spending and working department. But for Mr. Barron working along with his unpaid students the trials could not be made with the labour allowed. The third report is that the Chiswick Gardens are not well kept. This is a false impeachment and can easily be disproved. I have made myself acquainted on this point, and can testify, considering the poverty of labour Mr. Barron has at his command, the gardens are wonderfully well kept out of doors, and indoors, considering the nature of the glass, things could not well be better. Fellows should visit the gardens and judge for themselves. If, perchance, they find some rusty plants in one of the houses, the gardener-in-chief will give a satisfactory reason for their condition. The garden committee should have ordered them to be burnt long ago.

There is a pamphlet in circulation by the R.H.S., without date, entitled "A Short Historical Sketch of the R.H.S.," in which the writer says that £30,000 had been expended on the "Transactions" of the R.H.S. in old times, and adds "they are full of practical information of the highest value, and from which writers on gardening subjects have derived, and even still indirectly derive, a large part of their knowledge." A sad commentary on this is the action of the council regarding the society's journal of the present day. Up to the end of 1891 the journal of the R.H.S., like the journal of the Royal Agricultural Society, was free to all who thought well to reproduce the information contained in it. In 1892 a new departure took place, and it was entered at Stationers' Hall, and is now a sealed book to the gardening press, to be reserved for the use of future generations. Surely the R.H.S. does not live for itself alone, but for the good it can do in its day and generation. Why not therefore let any knowledge that comes to its mill be as free to all as the winds of heaven? I call upon

the Fellows of the R.H.S., if they desire to save its reputation and its most able man, to require that the council call a special meeting of Fellows to discuss the position of affairs.. It does not appear to me that it was the interests of the society which led up to the high-handed action of the council to make such a departure from the honourable presidents of all past councils of the R.H.S., but to serve some private interests, requiring the removal of the best servant the society has ever had, a man who has never been the tool to anyone, and further, it should be stated that years ago Mr. Barron refused a position far more remunerative than that of the R.H.S., but he refused because he loved the work of the Chiswick Gardens. In these gardens under Mr. Barron much eminent work has been done in the past, and can be done by him again with the means of doing it. During the days of the South Kensington Gardens as many as 100,000 pot plants were produced annually under Mr. Barron's directions, so that if the council desire to be nurserymen or market growers they have the man who can do the job for them and pay a dividend to the Fellows if we choose to descend from our high estate to become grovellers. Hybridisation was successfully carried out under Mr. Barron's directions. Take the Coleus for example, a despised plant just now, but when it was first seen it was looked upon as a modern wonder and brought a heap of money to the coffers of the society. The same man could do equally good work if he had the means and opportunity of doing it. Let the society ask Col. Trevor Clarke's opinion of the value of Mr. Barron's services, and his opinion is worth a great deal; he saw more of the work done at Chiswick than almost any other man at the time.—Peter Barr.

—— The reference made in The Garden to the retirement of Mr. Barron from the Chiswick Gardens, recently announced as being forced by the report of an outside committee selected for the purpose by the council of the Royal Horticultural Society, comes with exceeding surprise to the great body of the Fellows, with whom Mr. Barron has so long been a most acceptable and esteemed personage. It would seem as if the actual cause of this proposed retirement was but just leaking out, and, evidently anticipating severe criticism for what seems to be a very underhanded proceeding, so much publicity has now been given to the promised pension to Mr. Barron as though it might be useful in deprecating that criticism. Presumably the council of the Royal Horticultural Society consists of a body of gentlemen none of whom could be capable of doing personally anything improper, and it is difficult to understand that anything could be done collectively that is unfair or underhanded. Still, the fullest explanation as to the reasons that led to the appointment of this committee of inspection must be made absolutely clear. We are entitled to ask also that not only shall the names of these persons be published, but also that the report signed by them, whether unanimously or otherwise, shall be published also. This is a matter which concerns all the Fellows as much as it concerns the council. Mr. Barron was the servant of the society years before a single member of the present council held office. He always in the past enjoyed the fullest confidence of previous councils just as now he enjoys the fullest confidence of the entire body of Fellows. Most certainly, too, he has knowledge rendering him specially fitted for the position he fills and that places him head and shoulders above all others, whether friends or antagonists. We as Fellows cannot wait six months for a complete elucidation of all the mystery which surrounded this retirement of the society's most valued servant. Fellows should go to Chiswick and there see what the conditions found in the gardens are. A Fellow who saw them with me for the first time recently was charmed. He said that he had seen nothing in gardening so good, so diversified, and so interesting to him anywhere. That would, I am sure, be the testimony of many Fellows and visitors if they would take the trouble to go to Chiswick and see for themselves what is being done there. Where is the man who thinks, especially with Mr. Barron's comparatively poor aid, that he can do better? I dare to say it will be a cowardly act to refuse to publish this committee of inquiry's report, because that alone can justify an act that is at once creating so much criticism and arousing such deep antagonism. I do not know why alone of the gardening papers you should publish the statement that this retirement is due to a certain committee's report. The fact can hardly have been a secret from other papers, though it was to the mass of the Fellows. For such publication The Garden merits the warmest thanks of a deeply-concerned F.R.H.S.

NOTES FROM CHISWICK.

Those interested in the best of garden flowers, fruits, and vegetables might well visit the gardens of the Royal Horticultural Society at Chiswick. Trial collections of Fuchsias, Cannas, Violas, Asters, Sunflowers, and perennial Phloxes are very interesting to those who grow these flowers. In the large vinery devoted to Muscats there is a collection of the best varieties of Tomatoes in pots, and there is also a good collection of Figs in pots, a special culture for which Chiswick has long been famous, as it was formerly for its varieties of the Grape Vine. Trials of runner Beans, Cabbage, and Lettuce have been and still are being conducted, and the cordon Pears on the lower wall are a most interesting study, many of the best and most useful varieties, such as Marie Louise, Louise Bonne of Jersey, Souvenir du Congrès, &c., being heavily laden with fine fruits. Not the least interesting portion of the garden is the velvety grass plot stretching from the old council room to the great vinery. A circle of poles and chains most simply and gracefully covered with the wild Vitis riparia of the United States gives us a glimpse of the freshness and beauty possible of attainment by the more general use of the most distinct and beautiful of N. American and Japanese Vines. Now that the Bamboo is being grown as the epitome or expression, as it were, of beautiful grassy-leaved vegetation, we might do worse than use the wild Vines of the temperate world as typical of beauty of a totally different, but not less important, character. Ivies and Grape Vines would add a good deal of beauty to bare walls, pillars, gables, and tree trunks nearly everywhere if tastefully employed, and there is now at Chiswick a named collection of all the best Ivies well worth careful study.

Having known the Chiswick Garden many years, and having seen it before its area and importance were restricted, it was with mingled feelings that I visited it the other day. Formerly it consisted of about 33 acres with a fine arboretum, hardy fruit orchard, a fertile Peach wall, an American garden and wilderness. It is now a plot of 12 acres or 13 acres only, but still potent for good as of old. Repairs are badly needed to a couple of the older houses and to some frames, but a still more important matter requiring attention is the necessity that has long been felt for a better staff of working gardeners. As the Chiswick Garden, under the auspices of the R.H.S., is really the only public and independent trial ground in England, it is to be hoped it will be increased in its efficiency and importance, and not be allowed to degenerate into a second-rate market garden. When the means and objects aimed at are duly taken into account, the present condition of the Chiswick Garden is most creditable to its genial and loyal superintendent, who is being obliged to leave it after a loyal service of nearly forty years, respected by all true horticulturists in this country and elsewhere. F. W. B.

The weather in West Herts.—Most of the days of the past week were below the average, but, on the other hand, all the nights except one were warm. The temperature of the soil at both 2 feet and 1 foot deep now stands at 62°, or exactly the same as at the beginning of the week. The reading at 1 foot deep is 1° below the mean for August. During the present month there has been as yet only one day without some rain, the total fall amounting to 2½ inches, or very nearly the average for the whole of the month. The wettest day of all was the 13th, when nearly 1 inch was deposited. Since the beginning of the month more than 1½ inches of rain-water has already passed through the heavy, and about 1¼ inches through the light soil percolation gauge. The winds have again come from some southerly or westerly point of the compass.—E. M., *Berkhamsted, Aug.* 15.

—— A warm week, the temperature in shade on each day rising above 70°, and on the hottest day to 79°. Several of the nights, however, were cool for the time of year. The temperature of the ground at 2 feet deep has now risen to 65°, and at 1 foot deep to 67°, the latter reading being 4° above the average for August. No rain has fallen during the week, but owing to the previous heavy rainfall a little rain water still continues to come through the percolation gauges. The air has remained very dry during the daytime, and on the 19th the difference between the readings of an ordinary thermometer and one with its bulb kept constantly moist amounted to 14° at 3 p.m. The winds, which have been light, have again come almost exclusively from some southerly or westerly point of the compass.—E. M., *Berkhamsted.*

Gentiana adscendens.—Having tried in vain to get some plants of this, I shall be glad if any reader will tell me where it can be had.—B.

Botany of Central America.—Would you kindly inform me through your columns where I could obtain a book on tropical botany that would give me some idea of the botany of Central America?—A. W. Copp.

From Norfolk Island.—May I venture to trouble you with one or two questions, which, if you would answer through the medium of The Garden—for that paper finds its way to this remote spot—I shall be greatly obliged. 1. How can I destroy Dandelions, they are so thick on my lawn that scarcely any grass is visible? They grow and blossom all the year round, and spread rapidly in the adjacent paddocks. 2. May a weed-killer, for example the Acme, be used in the neighbourhood of wells? How near may one use it to a growing hedge, and if on a path will it destroy adjacent grass, &c.? May it be used to destroy patches of weeds in a grazing paddock while horses are still in?—P. Herbert Metcalfe.

The plague of birds.—Would any of your correspondents learned in the law kindly state the provisions of recent legislation with regard to small birds? What information I have been able to glean has been but scanty, though so far as it goes it seems to show that county councils possess absolute power to schedule under the Wild Birds Protection Act every bird that flies if they be so minded. My gardener declares that he is liable to heavy penalties if caught taking nests, the only practical means of keeping down these feathered pests, shooting being out of the question in a well-kept garden. In this district we are over-run by birds of every size and description, and the damage done by them is quite incalculable. If we are to be hampered in this fashion land must sooner or later go out of cultivation, for gardening under such heartbreaking difficulties simply means ruination.—An Oxfordshire Amateur.

Water Lilies in hard water.—Certainly the non success of Mr. Milne-Redhead is only due to an excess of lime in the water. If he will examine the underside of one of the older leaves, he will find a complete incrustation of lime. — Max Leichtlin, *Baden-Baden.*

Royal Horticultural Society.—The next fruit and floral meeting of the Royal Horticultural Society will be held on Tuesday, August 27, in the Drill Hall, James Street, Victoria Street, Westminster, at 3 o'clock. A paper by Mr. C. F. Bause on "Crotons and Draceenas" will be read.

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"This is an Art
Which does mend Nature; change it rather; but
THE ART ITSELF IS NATURE."—*Shakespeare.*

FLOWER GARDEN.

HARDINESS OF CARNATIONS.

IN face of the fact that Carnations suffered severely from the past winter, it seems idle to debate the question of a trace of delicacy being present in the constitution of the plants. Before, however, we can be certain of that being the case, it may be well to examine closely the treatment generally accorded to Carnations, and perhaps it may appear that the hardiness of the plants on the one hand, or their assumed delicacy on the other, will be found to be altogether a matter of treatment. No doubt the complaint has been general of Carnations having succumbed to the severity of the winter. Less, however, has been heard of those that failed to survive the drought of summer, though very many gave way then, with the apparent result that Carnations are incapable of resisting either extreme heat or intense cold, and thus in a degree stamping a hardy plant with the possession of qualities that detract very much from its usefulness.

That there is no inherent weakness or lack of hardiness in the plants is proved by the behaviour of seedlings. These have everywhere passed the ordeal of heat and cold without receiving the slightest damage. I have here, for instance, a long border of seedlings of all colours, white, yellow, and apricot to maroon, with flakes and bizarres, Picotees of white and yellow grounds, and while all are in splendid health, it seems strange that plants propagated from these perfectly hardy subjects should in the process undergo some mysterious change and be unable to withstand a like degree of cold. It is a condition we do not find occurring in the case of other hardy plants, nor ought it to happen here. Turning to beds occupied with named, and therefore propagated plants, we have examples of younger subjects which have not had the same time to become established in the ground, and therefore less able to stand the vicissitudes of weather, and it is, I believe, just this question of time to become established that makes the difference between a Carnation being hardy or tender. None of the plants put out here last autumn gave way with the exception of those that were unhealthy. None of these, again, suffered from the drought, while those that were put out in spring did so, some of them even to the extent of dying. In practice I find that Carnations with good roots, planted in the beginning of September, invariably do well, while if left till the end of that month there is a certain amount of risk of failure. In the same way, unless special attention is given to the plants, spring planting always yields less good results than autumn planting. There is, of course, always a chance of disease affecting plants. That arising from climatic effects is beyond our control, but one of the most dangerous is largely due to injudicious treatment. I refer to the mischief effected by Tylenchus, the Carnation eelworm. Of all the troubles to be contended with this is by far the worst when it attacks the plants. Unfortunately, many gardeners are incapable of diagnosing its symptoms, and plants are consequently allowed to become a prey to this insidious enemy without anything whatever being done to effect its dislodgment. It hardly ever appears unless the plants are grown with much manure. By careful treatment I have been fortunate in cleaning diseased stock, and so fearful am I of by any means allowing it to gain a footing that I hardly ever employ organic manures. If the ground is in good condition, surfacings of chemical foods are generally sufficient to enable the plants to bloom to perfection.

With regard to whether some varieties are less hardy than others I imagine there is in this respect no difference; but some varieties are no doubt less robust than others, and some are more susceptible to disease. In any case there is, I think, no question that those possessed of little vigour ought to be allowed a treatment diverse from that given to more robust sorts. I make up a thin surfacing of sandy open soil for varieties that I know to be somewhat "miffy," and this has the effect of inducing a healthy growth. By degrees these will give place to others of equal beauty, but possessed of a stronger habit of growth. Meanwhile, a little attention to soil will, I am sure, do much to keep even the least robust kinds in good health.

Tyninghame. R. P. BROTHERSTON.

Tufted Pansy Charm.—This soft lilac self-coloured flower received a special commendation at the congress held at Birmingham last year, but in the matter of a good bushy habit it is deficient. A long straggling growth should be enough to condemn a tufted Pansy, be the blossom ever so fine. Not a few sorts, however, which seem indispensable for exhibition may be mentioned in this category, and I fear that were the desirable tufted habit insisted upon, such beautiful varieties as Archie Grant, Countess of Kintore and Mrs. H. Bellamy would be but little grown.—H.

Lilium Leichtlini.—This is one of the most graceful of all Lilies and quite distinct. The stem is slender and the flowers, which are supported by delicate pedicels, have the segments reflexed after the manner of the Tiger Lily. The blossoms of Leichtlin's Lily remain in perfection much longer than those of the majority of Lilies. It is by no means a robust species, and a good thriving specimen is an exception. A well-drained sandy loam seems to suit it best. This pretty Lily is a native of Japan, and bulbs of it are sent to this country during the winter months, but all those that are sold as L. Leichtlini cannot be depended upon to be true, for whether I have been more unfortunate than others I cannot say, but from the proceeds of different sales I have obtained quite as many bulbs of L. Batemannæ and L. pseudo-tigrinum or L. Maximowiczi or L. jucundum, as it is at times called, as I have of the true L. Leichtlini. The bulbs of these three are so much alike that it is quite impossible to select them from each other with certainty.—H. P.

Phlox Drummondi as an exhibition flower.—At the exhibition of the Taunton Horticultural Society on the 8th inst. cut blooms of Phlox Drummondi were numerously and very finely shown in bunches. The schedule of prizes did not specify the number of trusses which should form a bunch, but five or six appeared to be the number employed, and as some of the foliage of the plants was used as a setting for the bunches, the effect was very pleasing. The varieties of the improved form known as grandiflora were employed, and the flowers being cut when fresh and green the bunches were very effective, and they appear to have quite driven the Verbenas from the field. To have fine blooms the plants should be grown in good soil. Each individual should have ample room in which to develop; hence it is well to peg down in position the leading shoots. A little judicious thinning may be done with advantage, and if some protection could be afforded from showers a short time previous to the blooms being cut, the colours will be all the more vivid. No Verbena ever raised can compare with a truss of P. D. splendens grandiflora for exhibition. There is a good range of self colours among the varieties, and there are some showy ones having dark centres, broadly bordered with a paler colour. The striped flowers lack distinctness of character, the white grounds are too much blotted out with heavy flakes of colour, and there is need for improvement in these varieties.—R. D.

Tufted Pansies—their sportive habits.—These popular plants have a tendency to change the colours of the flowers, so that in some cases three distinct sorts appear on the same root or tuft. By propagating from the branches, which produce the variations, many new varieties have thus been obtained. Perhaps the most notable instance of this habit is the lemon-yellow Ardwell Gem. It sported into White Duchess, a pure white, distinctly edged blue, then Goldfinch, yellow, edged pale purple, is produced, and this in turn gives a sport with richer shades named Duchess of Fife. It again gives a slate-blue, introduced as Annie Wood. The changed colours are mostly constant, but occasionally we find them revert to the original. I noticed, for instance, blooms of Ardwell Gem on a plant of White Duchess. The type of flower in all the above-named sorts is a splendid one. The tufted habit is perfect. They have passed the severe test of hot, dry weather the best of all, and the plants are now, as they have been since early spring, literally full of bloom. Ardwell Gem and its sports have also the great merit of being proof against mildew, and are therefore of especial value for growing in the south.—S.

HARDY FLOWERS FOR CUTTING.

Now that a constant supply of cut flowers is required for indoor decoration, which supply ought to be maintained without diminishing the attractiveness of the flower garden, it is well to cultivate in the kitchen garden or in spare ground a reserve of such perennials, biennials and annuals as will be useful for cutting. Tall flower-spikes being almost a necessity for the long slender vases so much in vogue at the present time, plants producing these should for the most part be grown. Passing over the Narcissi, which are indispensable during the spring months, we have first and foremost the Gladiolus family, commencing with the early varieties, of which G. Colvillei albus The Bride, Fire King and insignis, scarlet and crimson; Blushing Bride, white with carmine flakes, and Duke of Albany, crimson with white flakes, are amongst the best. Later on come Lemoine's beautiful hybrids and the dazzling scarlet G. brenchleyensis. Leaves of Kniphofia associate well with the early section, and those of the Water Flag with the later. The Montbretias, of which crocosmiæflora is one of the best, should be grown in quantity, the blooms, orange-scarlet shading to yellow, being of a striking colour and the graceful scapes well adapted to effective arrangement. In light soils the Montbretias increase very fast, and I have seen a plot, which was planted thinly, filled with an almost solid mass of bulbs in three years' time. Hybrid Alstrœmerias, with their beautiful gradations of tint, ranging from cream colour to crimson, should have ample space allotted to them. The Irises are invaluable for decoration, although, the sections requiring different treatment, it will be found difficult to succeed with all alike if grown in similar soil and situation. I. stylosa, which produces its beautiful and sweetly-scented flowers during the winter, does best on sloping ground in light soil, preferring a position sheltered on the north and east. The Spanish Iris (I. Xiphion), of which only the self-coloured varieties should be grown, likes light and sandy soil. Golden King, orange; Canary-bird, yellow; Snow Queen, white; and Celestial, blue, are good varieties. The English Iris (I. xiphioides) flourishes in a heavier soil. In this section as well care should be taken that the whole-coloured whites, blues and mauves are obtained, and that the splashed varieties are excluded from the collection, as these latter have little value from a decorative

point of view. The self colours are variously named by different nurserymen and are very equal in merit. The German Flag (I. germanica) manages to thrive in almost any situation, and I have seen it equally at home on hard baked railway embankments of poor soil and in shady beds of deep rich loam. There are many beautiful varieties—Pallida, pale mauve, and pallida dalmatica, mauve-purple; florentina, white with a suspicion of lavender, the three foregoing being sweetly perfumed; flavescens, sulphur-yellow; atro-purpurea, very dark purple; and Princess of Wales, a grand white, are about the best of the self coloured. The Japanese Iris (I. Kæmpferi) should be grown in light rich soil and should be afforded abundant moisture during the growing season. The older importations possessed drooping falls, but in the newer kinds these spread out horizontally, some of the flowers measuring over 6 inches in diameter. There are double and single forms and the colours range from pure white to dark purple and lake. Three splendid Irises are ochroleuca, aurea and Monnieri, the colours being respectively white with yellow flake, golden and yellow. When well cultivated these exceed 5 feet in height and produce spikes of several blossoms. The variegated Water Flag is extremely handsome in leafage during the early summer before its flowers, which are identical with those of the common Flag of the English water meadows, are produced, after which the variegation departs. The sword-shaped leaves are valuable for decoration when at their brightest, and I have known the plant mistaken for the variegated New Zealand Flax when well grown.

White Lilies,

when they can be spared, are always acceptable, the Madonna Lily (Lilium candidum) being the especial favourite. This, when healthy bulbs are procured, will flourish in any soil and situation, but there being now a disease prevalent that often decimates whole ranks of these beautiful plants, no certainty of success can be depended upon. Personally, I should be inclined to purchase only such bulbs as I knew had flowered satisfactorily for some seasons. There might be some difficulty attached to such a course, but the disappointment of a total collapse just as the plants are giving promise of profuse blossoming is so great that any certainty of avoiding such disaster would more than repay the trouble. It is notable that in many cottage gardens these Lilies have been growing for years without showing a sign of disease. L. longiflorum Harrisi is another highly decorative Lily, its long, white trumpets being peculiarly adapted for arrangement in vases. With me, some bulbs that were brought from Bermuda were planted in ordinary garden soil, and have since bloomed satisfactorily every year. L. excelsum—sometimes known as I. isabellinum on account of the tint of its flowers—is also handsome in a cut state, as are L. croceum and the Tiger Lilies. Perhaps the most graceful of all the Lilies is L. canadense; this should be grown in peat and in a partially shaded situation. I know of no other Lily that has so light and elegant an appearance when arranged effectively, the poise of its deeply-spotted, starry bells, suspended from the long and slender foot-stalks, being especially beautiful. The Belladonna Lily may here be mentioned. If grown in a narrow border at the foot of a hothouse wall, a goodly show of flower-spikes, which are in great request for the house, will be produced year by year in the autumn. Solomon's Seal, though not striking in colour, is most attractive in form, and if well grown in a shady spot, will throw up long, curved shoots studded with pendent blooms, which in the late spring are most useful.

Of the perennial Campanulas there are many that are excellent for cutting. C. grandis alba is particularly effective, its tall spikes of bloom (from 2 feet to 3 feet high) being studded with open satiny-white bells, that stand out at right angles to the stem. The Peach-leaved Campanulas (C. persicifolia alba and C. p. a. flore-pleno) are both invaluable, and last longer in a cut state than C. grandis. C. pyramidalis alba, which should be grown as a biennial, is also fine, and should be cut immediately after the first blooms are fully expanded. If the individual flowers are removed as soon as they fade, the flower-spike retains its beauty for a considerable time. Erigeron speciosus, a very profuse-blooming plant, bearing flowers of a lilac-mauve with yellow eye, much like Michaelmas Daisies, during the summer months, gives a tint rare amongst perennials at that season. The single herbaceous Pæonies (albiflora and Emodi) are very lovely when cut, as are some of the less double tree Pæonies. Doronicum plantagineum Harpur-Crewe should be extensively cultivated, its large yellow stars being unique during the spring months. Many of the Poppies are most graceful in form and attractive in colour, one of the best for decoration being the single white Opium Poppy, which is most beautiful when artistically treated, though the flowers being very fleeting, the arrangement has to be renewed at least every day. The giant Oriental Poppy (P. bracteatum)—which at the time of its blooming is the cynosure of the garden—brings summer within the house with the glow of colour of its flaunting scarlet blossoms. The white Everlasting Pea (Lathyrus latifolius albus) must not be forgotten, as it produces a long succession of snow-white flowers, while the brilliant yellow Coreopsis grandiflora is most valuable for cutting and affords a lavish display of blooms; in fact, so extravagant of its beauty is this perennial that it oftentimes flowers itself to death, and a supply of seedlings should therefore be raised annually to keep up the strain. Bocconia cordata is very effective where a tall subject is needed, the flower-spikes being easily cut to a length of 7 feet or more. It associates well with Kniphofia Uvaria, the scarlet and gold of whose gorgeous flower-heads are set off to advantage by the neutral tints of the Plume Poppy. Gypsophila paniculata should be largely grown, as the light lace-like effect of its diminutive flowers and hair-fine branchlets harmonise charmingly with almost every form of floral decoration. The stately Hyacinthus (Galtonia) candicans, with its spire of white bells, should on no account be omitted, nor should Salvia patens or Lobelia Queen Victoria, which are valuable on account of their intense colouring, though the blue blossoms of the former are not very lasting, and the latter often proves difficult of management when permanently planted in the open. Herbaceous Phloxes, especially the dark red and white forms, should also be extensively cultivated, and perennial Asters, of which Robert Parker, large, light lilac; Harpur-Crewe, white; Archer-Hind, mauve-purple; and ericoides, which produces a profusion of tiny white Daisy-like flowers, may be recommended as well adapted for cutting. Of the perennial Sunflowers there are many varieties worthy of cultivation, Helianthus lætiflorus being one of the best, though the new Miss Mellish bids fair to usurp the premier position. Pyrethrum uliginosum, with its large white, slender-rayed stars, is much sought after, being far superior as a cut flower to the less graceful Chrysanthemum maximum, which, being slightly earlier in blooming, should not be entirely neglected. Another most effective white autumn flower is Anemone japonica alba Honorine Jobert, which, when well cultivated, grows to a height of 4 feet and provides a wealth of large white single blooms for the flower basket. A little grown perennial which does well in the same position as Amaryllis Belladonna is Erythrina crista-galli, whose long racemes of coral-red blooms are very serviceable when little of that colour is obtainable from the garden.

Of biennials, the white Foxglove and the Hollyhock are, perhaps, the most valuable, the former the more so owing to its white spikes being more easily handled and arranged, as well as to its immunity from any constitutional disease, which in the Hollyhock's case, unfortunately, often renders it anything but an object of beauty. I have, however, at times seen tall Hollyhocks used with marked effect for indoor decoration, and some should certainly be cultivated, seedlings grown on vigorously being less likely to succumb to the disease than plants raised from cuttings. In annuals, of Sweet Peas, of which there are now many new and lovely named varieties, it is difficult to have too many, while of the giant strain of the single Sunflower, both the golden and primrose varieties are absolutely necessary. The yellow Paris Daisy Etoile d'Or should be grown from cuttings, which will develop by the autumn into bushes carrying hundreds of large pale yellow flowers, shapely in form and delightful in colour. Field Poppies are great favourites for arranging in bowls and vases, and a good breadth of these should be cultivated.

Three subjects there are that, unless under exceptional climatic circumstances, will not be likely to produce cut blooms in the open. Where, however, they will flourish, and there are to my knowledge such favoured spots in the British Isles, the beauty of their flowers for indoor decoration will be admitted by all, though, being generally cultivated as pot plants, their blossoms are rarely used in floral decoration. They are Canna iridiflora Ehmanni, with Musa-like foliage and clusters of rose-pink flowers, Agapanthus umbellatus, both blue and white, and Crinum capense.

The foregoing notes do not pretend to be exhaustive in the matter of flowers for cutting, and it will occur to the most superficial reader that many beautiful and decorative favourites have not been touched upon. All the plants alluded to have been grown by me, and their flowers used for indoor decoration with satisfactory results.

S. W. F.

STOCKS.

Whatever may have been the harm done in some directions by the long summer drought, at least Stocks of many sorts have not suffered. I have rarely seen more beautiful shows of these flowers than have been furnished in some of our cottage gardens, where they seem to have done wonderfully well and to have bloomed profusely. Of course huge masses of these Stocks are often seen in seed grounds, and brilliant displays of them in large gardens, but never do they seem so thoroughly at home or so in accord with the surroundings as in a nice cottage garden. I came across many such gardens in Surrey during the past few weeks. One at Coulsdon facing the high road had broad borders, in which, mingled with other plants and flowers, pyramidal and branching Stocks of many colours were blooming abundantly. In the background stood the cottage, the windows aglow with well-furnished window boxes and plants in pots, whilst from the rustic verandah drooped festoons of Canary Creeper, or it formed arches encasing the floral decorations of the windows. Small tubs filled with Creeping Jenny and Fuchsias in the centre stood here and there on slight pedestals in the garden, the creeper covering the tubs and hanging down in graceful profusion. It was indeed a charming cottage flower garden, and well might the owner (an engineman) have been proud, for he seemed to be a true floral artist. In greater or less degree I have seen Stocks in exceeding beauty, and they literally filled the air with their rich aroma. How pleasant it is to realise that from a packet or two of seed sown under glass in the spring such a wealth of beauty can be thus easily produced. It is difficult to understand why the once highly favoured Brompton and Queen Stocks should now be so seldom seen. Have we partly lost the old forms, for they are so seldom grown in gardens? have our recent winters proved too destructive for them, or is it that the facility with which East Lothian, intermediate, and summer Stocks can be grown has led to the comparative abandonment of the old varieties? If we have no other Stock that is so noble, indeed almost

grand in its fulness as is the giant Brompton, it is certain none others are so bushy and so profuse in bloom as are the Queen, sometimes called the Twickenham section. Purple is not always a pleasing shade of colour in the summer Stocks, but in the Queen it is rich and beautiful. How effective have big masses of this colour, as well as the white and scarlet, looked when in full bloom beneath the overhanging trees in some market orchard. Both they and the Bromptons withstood many a hard winter in the past, and they might again if the chance be offered. Without doubt last winter's cold was far too great for Stocks to withstand, Wallflowers even succumbing to the frost wholesale. Still we may hope that all succeeding winters will not be so hard, and that many things not absolutely hardy may yet exist through them, even Brompton and Queen Stocks. I saw it was advised but a day or two since to make sowings of these varieties. That may be all very well if the plants are to be wintered in a frame, but even then they would show poor form next year. It would be much better were strong plants ready to be put out now, selecting sheltered places and soil that is not too stiff and water-logged, but rather dry; then, with ordinary care, plants may be wintered very well. With a fine strain of giant Bromptons some may be got into 6-inch pots and be left in a frame all the winter, but the finest spikes can only be got from strong, well-grown plants. A. D.

NEW CACTUS DAHLIAS.

Two or three years ago it seemed as though the acme of perfection had been attained with the varieties just then raised of this the most lovely of all sections of that monarch of autumn flowers, the Dahlia. However, each season since the distribution of the varieties just referred to, Robert Cannell, Delicata, and others, our florists have raised novelties which are improvements upon their predecessors. The true Cactus form of the flower is too well known now to need description. In the introductions of the past few years we have at our disposal lovely flowers of almost every colour one can desire, so that for decoration we are well supplied. How far superior for this purpose are the Cactus varieties to their companions, the decorative Dahlias, or even to the singles! The latter are not so pretty in form, nor can they be considered so artistic, with their smooth round edge, whilst their petals will soon commence to fall. Of course the strong point against many Cactus varieties, and some of the most beautiful too, is their habit of growth, the flowers being produced on short stems and buried beneath a mass of foliage. This is a fault which also tells effectually against their use for garden decoration. But it does not exist in the case of many varieties, and will doubtless be in a few seasons eradicated from all varieties of the family which will then be in vogue. As a choice variety, possessing every quality which is deemed to constitute a good plant for this purpose, I would mention Matchless, which was distributed last year. It is of true Cactus shape, very free flowering, of medium size, with a tendency to be large, and of perfect habit, throwing the blooms well out of the leaves; the colour is well described as a rich velvety maroon. It also commences to flower fairly early in the season. Again, for cutting some of the current varieties are too large. On the whole, in the production of novelties it will be best to adhere to a medium-sized flower. That such is likely to happen would appear from the new varieties staged at the meeting of the Royal Horticultural Society on August 13. These also afforded ample evidence that there will be no falling off in the new Cactus Dahlias exhibited during the present season. Of those at the Drill Hall particular mention should be made of Mrs. A. Beck, an exceedingly pretty flower, in colour and size most suggestive of Panthea, but the petals well pointed and the flower a perfect Cactus. The colour is a reddish salmon. The shape is admirable. Perhaps more attractive still was Arthur Cheal, larger than the above, and shown in fine condition. The colour is a very bright, fiery crimson-scarlet, reminding one of that of Major Haskins, but the outer petals are straight, not having the curve noticeable in the latter. This variety should become very popular. Other new varieties exhibited by Messrs. Cheal and Sons were Mrs. Gordon Sloane, of very novel and striking colour, pinkish terra-cotta, and Mrs. Broughton Stirling, rosy magenta, a pretty little flower with a profusion of very thin fluted petals. These two varieties will probably improve considerably before the end of the season. Mrs. Montefiore is also good. J. F. H.

Notes from Baden-Baden.—Lobelias of the fulgens class are showing flower. There are some good varieties, such as Queen Victoria, deeper in colour, Firefly, even brighter than fulgens, f. rosea, a very distinct variety, and Brun de Chataigner, a sort of maroon shade. I have raised a pale rose variety, and also violacea, of a striking violet colour. Gipsy, Glow-fire, and Luna are good and distinct; the two former evidently have an infusion of the blood of L. Kerneri; Gipsy comes near Queen Victoria, and Glow-fire near Firefly, but both have their spikes much condensed and better beset with a mass of flowers, thus showing a broad sheet of colour. Luna is an improvement on fulgens, having dense spikes of broad, full flowers of a peculiar shade of copper, or sort of glaucous scarlet. Both varieties of Incarvillea have proved hardy here; Vilmorin's had stalks up to 3 feet, and showed ten of its large blooms. Campanula mirabilis grows well. M. Cuisin's plate shows a wonderful pyramid of large lilac flowers 1 foot through, the foliage entirely hidden; it will prove a most remarkable alpine. Crocus Suworowi is one of the earliest, and a curiosity at the beginning of August; flowers white, with faint stripes. C. vallicola, which will open in a few days, is similar to Suworowi, only the flowers are larger and adorned with a few yellow blotches. As to Kniphofias, it is difficult to produce something striking, yet in Helios and Surprise I can show two splendid sorts. Helios since last year has much improved, and shows now its true character; it bears two enormous candelabrum spikes of an oval shape, orange-yellow. Surprise is an early flowering variety, the spikes very large, of a salmon-orange, a new colour among Kniphofias. A very striking and interesting plant is a new species of Berckheya carrying a bold raceme with large yellow flowers; the leaves, too, which are serrate, 2 feet long by 6 inches broad, are very ornamental; the upper side is strongly nerved and netted, of a deep shining green, and the under side of a pure creamy white. A group of these plants attracts attention from afar.—Max Leichtlin, *Baden-Baden.*

Effects of lime on Nymphæas and other plants.—I have read the courteous reply from Mr. T. Smith, of Newry, in answer to my inquiry on page 98 of The Garden. Mr. Smith writes that Nymphæas are all lime haters, and he holds out no hope of my being able successfully to cultivate these beautiful plants in my pool filled from a spring impregnated with lime. A curious instance of the antipathy of plants to lime has just occurred here. Having a plant in my rock garden of Androsace Leichtlini, I placed a piece of limestone underneath its trailing stems. A few inches below was growing a healthy plant of Asplenium septentrionale. I soon found out this plant was becoming yellow and sickly, no doubt from the rain-water washing over the piece of limestone above it. Near at hand I had other plants of the same Fern growing healthily amidst pieces of porphyry. I ought to have thought of this, as I have never found A. septentrionale growing wild except upon rocks of igneous formation. A. fontanum and A. lanceolatum are instances of this antipathy. A. fontanum will not thrive unless its roots are in contact with limestone, whereas to A. lanceolatum (its near ally) this contact is poisonous; it must have a granitic or porphyritic rock. Acacia dealbata is a remarkable instance of this. In the gardens around Cannes it grows plentifully and luxuriantly, whilst but a few miles off, at Nice, under similar climatic conditions, it is stunted and unhealthy. In the latter case it is growing in calcareous soil on mountain limestone, whilst at Cannes it has decomposed granite for its sustenance only. — R. Milne-Redhead, *Holden Clough, Clitheroe.*

ROCK GARDEN NOTES FROM KEW.

At Kew Gardens the rockwork is interesting almost all the year round, but perhaps never more so than at the present time (August), when the flowers of the summer are practically past and the autumn flowers are not yet developed. It is the bridging over of the dull season that frequently presents some difficulty, and in this respect a good example is set at Kew, where many of the hardy plants are still as gay as can be desired. A short reference, therefore, to the plants blooming at the time of my visit (early in August) may help others in their selection.

That glorious Himalayan Poppy (Meconopsis Wallichi) still has its pale blue blossoms unfolded on stems quite 5 feet high, and occupies a damp, partly shaded position. Gentiana asclepiadea rears its dark blue flowers quite 2½ feet from the ground, and forms a good contrast with the white variety and also with the white Symphyandra Hoffmanni, which, but for its connate stamens, would be scarcely distinguishable from a Campanula, having its large flowers disposed in a long raceme quite 2 feet high. Of Campanulas blooming on the rockwork, I will mention Campanula haylodgensis, a dwarf hybrid about 8 inches high, with pale blue flowers; the rare little gem, Campanula excisa, with deeply cut corolla and blue flowers; Campanula versicolor Rosani, which is pale blue with dark centre; and the well-known varieties Campanula garganica hirsuta, C. pulla, C. pusilla alba and C. carpathica alba. Alpine Poppies are mostly over, but I noticed the pretty little pale pink variety Papaver alpinum roseum still flowering profusely, as were also Silene Schafta, Chrysogonum virginianum and the bright crimson Silene armeria. Quite a gorgeous effect is produced by the showy annual Erysimum Perofskianum, which has large racemose heads of a brilliant deep orange colour, each individual flower measuring nearly an inch across; the leaves are lanceolate with a dentate margin, and the plant forms a most handsome bush quite 2 feet high. Another yellow flower of striking beauty is Hunnemannia fumariæfolia, a Mexican perennial with large, Poppy-like bright yellow flowers of great substance, springing from a compact mass of triternate glaucous leaves. The plant, from 1½ feet to 2 feet high, is most effective, but very probably requires protection during winter.

A very distinct and handsome Thyme is Thymus comosus, which is larger in all its parts than the better-known varieties and bears large spikes of pale pink flowers. Noteworthy, too, is a handsome dwarf plant under the name of Coris monspeliensis; it is only 6 inches high, has linear leaves reminding one of a Sedum, and bears elongated heads of pale purplish blue flowers.

On a prominent rocky ledge I noticed the graceful Echium plantagineum, which has its very small leaves densely crowded and is laden with red buds and deep blue flowers with red stamens. The plant is of elegant habit and well deserves the prominent position it occupies. Quite near the same rock Tigridia pavonia expands its showy flowers, and Prunella grandi-

flora rubra, Erigeron aurantiacus, Hypericum olympicum and Polygonum affine make a good show of colour near a bog bed carpeted with Pratia angulata and the golden-leaved variety of Lysimachia nummularia. The Bead Plant (Nertera depressa) is used for a carpeting plant on higher ground, and the variegated Sibthorpia europæa covers the ground of a level peaty bed. A delightfully showy plant is Lamium maculatum aureum; it forms a dwarf carpet of large, bright golden yellow leaves, suffused with white in the centre and setting off to great advantage the rosy purple flowers with which it is laden at this time of the year.

The only Androsace still flowering is A. lanuginosa, which is doing well, as is also the dwarf Inula ensifolia, with flowers resembling those of Buphthalmum salicifolium, but close to the ground. Of Primulas, I only noticed Primula capitata, with its globular heads of lilac blossoms; and of Geraniums, the varieties Geranium cinereum lancastriense, G. subcaulescens, G. argenteum, G. Endresi, and a dark blue form of G. pratense are still in bloom.

Rather interesting is Erodium guttatum with white flowers, showing a dark blotch on each of the two upper petals. Œnothera missouriensis with its yellow flowers occupies a very prominent position, and close by Polygonum sphærostachyum raises its blood-red spikes of showy blossoms quite 18 inches high. A little further on on the same side are the bright yellow flowers of Potentilla bifurca, the tall Delphinium cardinale quite 5 feet high covered with scarlet flowers, and the North American Eupatorium ageratoides with its compound corymbs of white flowers about 2½ feet high. Of Anemone japonica the variety now flowering at Kew is a specially dark and handsome one. Its neighbours are Tradescantia virginica and Dianthus deltoides, both in full bloom, as is also the elegant Lythrum virgatum with its crimson spikes and graceful habit.

In the foreground a prominent place has been allotted to the pretty white annual, Alyssum maritimum, while more in the background are Potentilla fruticosa, Coreopsis lanceolata, Eryngium alpinum, Lysimachia barystachys, and such stately plants as Telekia cordifolia, Inula, Helenium, and Hemerocallis fulva var. longituba. The last variety is very distinct, bearing double flowers, which are deep red at the base, while the petals generally are deep orange.

As the foregoing names do not form anything like a complete list of the varieties now in bloom at Kew, it will be readily seen that though the summer is past, hardy flowers are still in abundance in these gardens, where no efforts are spared to provide instructive recreation for amateur and botanist alike.

Elmside, Exeter. F. W. Meyer.

FLOWER GARDEN NOTES.

The mention in last week's notes that the time had come when it was advisable to prepare for the propagation of those tender plants which still hold their own in flower garden arrangements brings the reminder that there are other flowers of much greater value which also demand attention, viz, those that are either perfectly hardy or only require sufficient protection to keep the frost out of the soil, and whose propagation can be effected in the open or in any ordinary pit or frame. Pinks, Carnations, Violas, and alpine Phloxes are already inserted, and in their respective quarters are progressing favourably; other things requiring attention later on are the taller Phloxes, both early and late, Antirrhinums, Pentstemons, herbaceous Lobelias, and the like. Any of these things represented at the present time by batches of seedlings will repay careful inspection, in order to ascertain what there is at once new and good, and when something out of the common is found, to promptly mark it with the view to future propagation. I suggested in recent notes that very good things were obtainable from almost every packet of seed in several of the above herbaceous plants, that is if the seed was obtained from a thoroughly reliable source, and see something of the kind was specially noticed in a visit recently paid by the National Chrysanthemum Society to Sir T. Lawrence's seat at Dorking. Mr. Bain is reported as having two beds of Pentstemons, one of named varieties, the other of seedlings from seed sown in January, 1895, and an inspection of both resulted in the opinion that the seedlings were decidedly the better. Nothing could more fully substantiate the necessity of a careful inspection of beds of seedlings with the view, as I have said, of selecting the very best for propagation. In this way some special colour that is difficult to find among named sorts is often obtained. In the case of Antirrhinums, having fixed some plants of good constitution and the required height in different shades of white, yellow, and crimson, the same may be kept annually for special purposes and increased by means of cuttings, whilst for large beds where no particular colour is required, as also for forming clumps on herbaceous borders, seedlings may be employed. The propagation of early-flowering herbaceous plants, that is those that are out of bloom quite early in the season, may now be taken in hand. It is not necessary to do it thus early, but at the same time any work of this description that can be done at the present time will relieve the operations that are necessary with the general overhauling of borders, Doronicums, Heuchera sanguinea, and some of the hardy border Saxifrages being cases in point of plants that may be increased by division at this season. I have grown Heuchera sanguinea and Saxifraga pyramidalis together for the last two seasons on a narrow border that was formed in front of a wall on which are climbing plants in variety, and they make a brave show in such a site at their respective seasons.

Sunflowers.—The varieties of Helianthus are strongly in evidence just at present. I put in several clumps of the miniature annual Sunflower to fill up a few gaps; these have developed into large bushes 5 feet in height and are now full of flower, whilst double forms are supplied by the perennials H. multiflorus plenus and H. Soleil d'Or. Both the latter are exceptionally good varieties for cutting, not so graceful perhaps as the single forms, but lasting longer in water. These, as a rule, continue in good health for many years when once established, but if there is the least indication that they are going back, the clumps should be lifted as soon as the foliage has died down, and the strongest pieces being selected, replanted in some good soil that has been deeply dug and well worked, incorporating a little good manure if the soil is rather on the light side.

Starworts.—The perennial Asters, or Starworts, are already with us, and as by the aid of an extemporised covering to keep off severe frost we are usually cutting the late varieties until the beginning of December, the season of these beautiful late summer and autumn flowers will be a long one. Sorts in flower at the present time are acris, some varieties of Amellus and lævis, paniculatus Dot, and sagittifolius. The last is not remarkable for the size or individual beauty of its flowers, but the fact that it throws a long graceful spike makes it very acceptable for cutting at the present time. One has to be a little careful in planting Starworts, to study in fact the flowering season, the height and the habit of different varieties. Thus, for instance, varieties of graceful habit, as sagittifolius or diffusus horizontalis, can be planted together in quantity and produce a very pretty effect; whereas very stiff and formal kinds, as acris or densus, look best in clumps of not more than two or three, with something lighter on either side of them. Writing of flowers for cutting reminds me to note how very late one of our very finest things, Montbretia crocosmiæflora, is this year, doubtless owing to the severe frost in February last and their consequent late breaking away.

Seedlings.—Boxes sown earlier in the summer with herbaceous plants in variety, tall, as Delphiniums and Foxgloves, of medium height, as Pyrethrums and Aquilegias, and dwarf, as Picotees and Pansies, will now be pretty well furnished with young plants, and it is advisable to get these shifted before the roots have too firm a grip of the soil. If convenient to transfer them to permanent quarters, this may be done, but if there is no room for them at present on the borders, they may be consigned to nursery beds for the time being and get their permanent shift later on. Perhaps the nursery bed is the best place while the seedlings are still small; one has them more under the eye here and can take measures to check the attacks of slugs, a dangerous enemy to the majority of herbaceous plants whilst they are yet in a young stage. It is well when pricking out to give the seedlings sufficient room to allow of a small hoe being run between the rows if the plants remain in the nursery bed until early spring. East Lothian Stocks, to stand through the winter, may be sown at once, if not already done. Autumn-sown plants that can be planted out early and get well established by early summer are more satisfactory than spring sown stuff in a very hot dry summer if facilities for artificial watering are not satisfactory. Self-sown seedlings of Polyanthus are coming up in their thousands where seed-pods were not removed. This is an easy and effectual way of securing a big stock of these favourite spring plants, and the seedlings can be the more easily removed if, some time before the seed ripens, the ground is lightly eased about 1 inch in depth round the plants, broken down, and a little fine soil added if this is deemed essential.

Claremont. E. Burrell.

Lilium longiflorum Takesima.—Occasionally among the vast numbers of Lilium longiflorum sent here from Japan during the winter months a distinct form crops up which may be readily distinguished from any other variety of L. longiflorum by the exterior of the unopened buds being suffused with purple, while the stem is also of a blackish purple hue, and the leaves are longer and narrower than those of the type. Its prominent characteristics are far more pronounced when in the bud state than they are after the flowers are expanded, for in this latter stage the purplish tinge of the exterior to a great extent disappears. There is no difference in the bulbs, hence it cannot be selected till the flower stem has pushed up. Though by no means superior from a floral point of view to the other forms, it is nevertheless interesting as an example of the variability to be found in Lilium longiflorum. Thus we have from Japan this particular kind, two variegated forms, a couple at least quite distinct from a floral point of view, and from Holland arrives the typical L. longiflorum, inferior in flower to all the others, while in addition we have the geographical form of L. longiflorum, sent here from Bermuda under the name of L. Harrisi.—H. P.

SHORT NOTES.—FLOWER.

Tufted Pansy Purple Empress.—This is a new variety thought highly of, and it certainly has rich colouring. The flower is round—too round for my own taste, for I think the circular bloom not distinct enough from the ordinary Pansy. It has a commendable habit.—H.

Cactus Dahlia Gloriosa.—It will be difficult to obtain anything of more perfect Cactus form or a sort of better growth than this. The colour is bright crimson-red; the petals long, narrow and twisted, forming a most handsome flower. The variety throws its blooms well out of the foliage, and the long footstalks enhance its value for cutting.—H.

Effects of the drought upon tufted Pansies.—Plants which passed through the late dry weather without being watered have responded surprisingly to the more recent rains, and are now a perfect mass of bloom, and uninjured by mildew, whilst those plants which had been constantly watered are badly affected with the disease, and also decidedly past their best in the matter of bloom.—H.

Trees and Shrubs.

WISTARIA SINENSIS IN DUBLIN.

The illustration from a photograph by Mr. Greenwood-Pim shows a portion of a fine old Wistaria trained over a doorway in the College Gardens at Dublin. The specimen is about fifty years old and rambles over a considerable amount of wall space, and when covered with its pendent clusters of lilac flowers (as shown in the engraving) it is a very graceful and pleasing object. Seeing the time that has elapsed since this splendid climber was introduced from Japan, the wonder is that it is not more generally seen on walls and gables everywhere. Near London it is plentiful and flowers profusely, while one of the floral sights of April in Paris is to see the Wistaria on walls, pillars and iron railings everywhere. There is a fine plant scrambling over the grey stone gateway of Gabrielle's house at Fontainebleau, and one may see its purple festoons dangling over the



Wistaria sinensis over a gate in the College Botanic Gardens, Dublin. Engraved for The Garden *from a photograph by Mr. Greenwood-Pim.*

windows at Hampton Court in a simple and pretty way. There used to be a white-flowered variety there also, near to the great Vine. Even if the Wistaria was not such a fine flowering shrub, it would be well worth growing for its wreaths of foliage so variable in colouring, from the fawn-tinted young leaves of spring to the golden coloured ones of autumn.

Travellers in Japan tell us of the wonderful beauty of the Wistaria as there grown in the temple gardens or around the most popular tea houses of that charming land. There are six or eight species wild and cultivated in China and Japan, but perhaps none better for our climate than W. sinensis and its seedling varieties. One reason why the Wistaria is rarely seen is that it is a slow grower in its earlier stages of existence. It is best propagated by layering the long shoots or branches in the ground under stones, and in this way strong young plants may be obtained. Once well planted in deep rich gravelly soil, all it requires is training occasionally and ample wall space. One way of training this plant (as adopted in French gardens) deserves notice. In that country the walls are often devoted to the best of Pears and other fruit trees, but by stretching a single or double wire on iron supports 2 feet or so above the wall top the Wistaria is trained thereon, and thus becomes a very beautiful feature in town or villa gardens.

F. W. B.

Last winter's message to the trade.—I have been greatly struck at Ventnor with a point which should be of some interest to the nursery trade in the south of England. I refer to the wholesale destruction, approaching to extermination, of the shrubby Veronicas in particular. The green Euonymuses are all right, but the gold-edged ones are much damaged. The peculiar charm of these south coast resorts lies in these unusual shrubs. At Ventnor the Veronicas were as wild and common as in South Devon; now they are gone. The trade should, therefore, propagate these things freely, and everyone from the town authorities to the cottager should purchase and replant at once. Large owners of seaside property should supply shrubs gratuitously; indeed all that can be done should be done. Some more likely things not hitherto tried should also be added. The hardy Fuchsias have also suffered. —Alfred Dawson.

Weigela Congo.—This must be included in the list of persistent flowerers, for it is now laden with bloom, and still carries a great number of unopened buds. It is one of the darkest coloured of any, the blossoms being of a deep claret-crimson tint, but in a mass it is decidedly less showy than the brighter Eva Rathke. The large white stigma just protruding from the mouth of the flower is very conspicuous against the dark crimson petals. This variety forms a bold, strong-growing bush, somewhat in the way of one of the oldest of these crimson kinds—Lavallei, but the blossoms of Congo are deeper than those of the other. In both of them the flowers do not expand so widely as those of the W. rosea class.—T.

Hydrangea paniculata.—This is undoubtedly one of the showiest of all autumn-blooming shrubs, and is not only a sure flowerer, but also quite hardy—at least in the London district. Of the two forms in cultivation the one known as grandiflora or floribunda is more popular. This variety has nearly the entire panicle composed of sterile flowers, and the substitution of four large petals in place of stamens and pistil renders it a closely-packed pyramid of white flowers upwards of 1 foot long. The ordinary form, whilst less striking, is more graceful than the other. Its lighter panicles are more largely made up of fertile flowers, but the sterile ones are considerably larger than those of grandiflora, some measuring upwards of 2 inches across. The leaves are borne in pairs, or more frequently in threes, at each node; they are ovate, pointed, and covered with pubescence. The species is a native of Japan, and was introduced in 1874. It can easily be increased by cuttings taken before the wood becomes hard.—B.

Spiræa Douglasi.—For trimly kept beds and shrubbery borders there are numerous other Spiræas which are preferable to this, its strong, thick habit and somewhat aggressive mode of growth making it rather troublesome to keep within bounds. For the wild garden, on the other hand, and in fairly open woodland it is an excellent shrub, forming dense masses of erect, slender, Reed-like stems, which in July and August are each crowned with a dense panicle of bright rosy flowers. It is then particularly handsome and effective. The leaves are narrow-oblong, toothed towards the point, deep green above and whitish beneath. Its vigorous habit renders it suitable for almost any position; even in dry, sandy soil it will thrive better than any other Spiræa. It is, however, when planted in the vicinity of water that it reaches its full luxuriance, and may then be seen 6 feet or more high with panicles of proportionate size. It is a native of North-west America.—B.

Kitchen Garden.

HERBS FOR WINTER USE.

Parsley.—This is in great request in most places the whole year round, often more so during the dull months of winter, when it is not always easy to keep up a supply, hence the necessity of making provision while there is yet time. In many gardens sufficient attention is not paid to the growth of this useful herb, for often a sowing made alongside a path in spring has to suffice for the whole year. Here the plants are allowed to overcrowd each other through the summer, and by the time frost sets in the foliage has become so drawn and tender that a few degrees kill it to the ground, thus causing a blank till growth commences in spring. To have a good stock of healthy fresh leaves it will be necessary to make two or three sowings, one in spring to give a supply during the latter part of summer and autumn after those plants which have withstood the winter have gone to seed, another in June to furnish plants for transplanting at the present time, and a third in August to provide a stock for spring and early summer use. Plants raised from the June sowings will now be large enough for transplanting. A piece of light dry soil in a sheltered situation should be selected, for on such the plants do not make such sappy growth as they do on rich retentive ground. A distance of from 9 inches to a foot should be allowed between them, as this will prevent the foliage from being drawn up too spindly. Should the weather be bright after planting, shade for a few days to prevent undue flagging, after which no further care will be needed till the approach of frost, when a temporary frame should be put round so that lights may be put on in case of severe weather. In some places snow will protect the plants from frost but in low-lying damp situations the snow melts thus leaving the plants exposed to the severity of

the frost. Not much protection is required, for the plants being grown hardy are better able to resist the cold, but in case of long-continued frost it is well to cover the lights with short litter during the time it lasts to prevent the leaves from getting frozen, for nothing has a greater tendency to destroy plant life than that of denuding it of its foliage when frosted. Plants that were left in the seed rows should be thinned to a distance of a foot apart, so that the foliage may have ample room to develop. That from the spring sowings may be cut and dried, as it will be too tender to withstand the frost, and such will be found very acceptable for flavouring soups, &c. Sowings made in August should be thinned to 6 inches apart as soon as the plants are large enough to handle; this will induce them to be hardy and dwarf, and at the first approach of warmth in spring they will start into growth, or they may be hastened by having portable frames put over them. Spring sowings are always better for being thinned early, as the foliage is then induced to grow more robust, and therefore stands much better when used for garnishing. Varieties are said to be very numerous, but any good strain of curled may be grown, and those who are desirous of saving their own seed would do well to plant a few roots of the dwarfer and Moss curled by themselves, in order that a true stock may be obtained. The Fern-leaved varieties are very pretty for garnishing, especially when well grown, as the leaves are then more robust and do not wither so soon.

Chervil.—During winter when the young foliage of Tarragon is scarce the leaves of this plant are often in great demand, and as the plants make but slow progress during the dull, cold weather, they should be encouraged to grow before frost sets in. A sowing made at the present time in drills 6 inches apart on a warm border will give a supply of nice fresh leaves for use during the winter. This plant is somewhat hardier than the Parsley, but it does not make such rapid progress, neither does it grow so well when transplanted; therefore the plants must be thinned to the proper distance where the seed was sown. On our heavy soil we usually allow 6 inches each way, as the plants are apt to become crowded. In addition to the leaves being required for soups, many use them to flavour salads, in which case they should be quite small, being cut off the same as Mustard and Cress. When grown for this purpose, frequent sowings should be made, as the plants if cut below the seed-leaf do not grow again.

Mint.—The green leaves of this are often in demand during winter and early spring, and roots are often dug up from the permanent beds to give a supply. It is, however, not generally known that this plant can be propagated from cuttings of the young shoots at this time of the year, and if these are inserted in pots and stood in a cold frame they will continue growing through the winter. If wanted in greater quantity, the pots may be plunged on a slight hotbed, when young growth is quickly made. No garden, however, should be without a good supply of permanent plants, and no time could be better than the present for making new beds; therefore those desirous of increasing their stock may do so either by cuttings of the stems or by dividing the roots. If the former mode is adopted, insert the cuttings about 3 inches apart and keep shaded till roots are formed; when by the latter mode, select some of the strongest young roots and plant them in rows 6 inches apart; they will become well established before winter and start into growth early in spring.

Savory.—The winter or perennial kind may now be propagated by cuttings inserted in a cold frame, where they can remain till spring, to be afterwards transplanted into their permanent quarters. It is also well to plant some of the established plants where they can be protected in case of severe weather, as many suffered last winter owing to the frost. Plants of the annual or summer Savory should be taken up and dried for winter use before the season gets too far advanced. When dried it is better to preserve the leaves in close drawers to retain their flavour.

Basil.—There should be no difficulty in keeping up a supply of nice fresh leaves during the summer, for if the seed be sown on a slight hotbed in spring plenty of plants will be produced for transplanting to the open border when the weather is favourable, but to have this green through the winter months is by no means an easy task, for, like many other such plants from the East Indies, it requires special care. As the green leaves are in great request in some places, gardeners are often called upon to produce them; therefore, preparations should be made in time. Sow the seed thinly in boxes filled with light, rich soil, which should afterwards be placed on a slight hotbed near the glass. When the plants are about an inch high prick them off into other boxes and return to the hotbed, keeping them as near the light as possible. As the nights get colder the boxes should be removed to the Cucumber house and kept near the glass, where they may have all the light and air possible. Plants so treated will usually grow sturdy and give a supply of leaves through the dull months.

Thyme.—Most of the old plants were destroyed in this district last spring owing to the long spell of frost, and those who had not taken the precaution to insert cuttings in a cold frame ran short through the summer till plants raised from seed were large enough for use. It is advisable to put in a supply of cuttings each autumn, for by so doing the old plants can be cut hard back for use, there being no fear of the stock being lost. Cuttings should be inserted thickly in light sandy soil in a cold frame, to be transplanted in spring to where they are to remain. Plants so raised are much more forward than those from seed sown in spring, and the trouble in propagation is no greater.

Sage.—This is also in great request during the autumn and winter months; therefore a good stock should be grown in all gardens. Last winter was so severe that many plants were killed, and others suffered so much that they had to be cut back to the old wood. Where the stock is short cuttings may be inserted in frames to provide a supply of plants for putting out in spring.

H. C. P.

Cauliflower Pearl.—Owing to the drought there have been complaints with regard to this Cauliflower. I note "C." (p. 65) recommends it to follow the Walcheren, and as it may be termed a dwarf selection of that old, well-known reliable variety, it is well adapted for summer work, the heads, though not large, being pure white and of delicate flavour. The growth is very distinct, being close to the soil, the leaves protecting the heads well. It is in my opinion the very best type of Cauliflower for summer use. Sown in March, and again six weeks later, there will be a succession of good heads from July till September by making several plantings. I do not know of any variety which stands drought so well as the Pearl. If required early a pinch of seed sown in heat will give nice heads in June, but its chief value is for summer work.—G. Wythes.

Potato Duke of Albany.—Some little time ago a capital reproduction from a photograph of the above-named Potato, accompanied by a brief note, appeared in The Garden, and at this season of lifting early varieties I should like to add a word in its favour. I have just finished lifting it, and the crop is very heavy and quite free from disease. The proportion of small tubers is exceptionally small, and the yield averages a little over 10 tons to the acre. Some few years ago I discarded all other early varieties in favour of this, and grow it now alike in pits for first crop, under south walls for second, and on borders for general digging. The particular border from which the bulk of the 1895 crop has been taken was for the three preceding years in Strawberries, and on deciding to remove the latter last season I left all old plants, runners and surface mulching on the ground, chopping them to pieces with a sharp spade. When digging was in progress, the instructions were to get out a good trench, to dig deeply, and bury the rubbish well, leaving the surface as rough as possible. The ground worked splendidly in March after the long frost, breaking down like a bed of ashes right away to the partially decomposed rubbish. The latter afforded a capital aid in retaining moisture, and as a consequence the haulm came away without a check, feeling nothing of the prolonged spell of drought. I would particularly recommend this Potato to the attention of cottagers and allotment holders; it is not only a grand cropper and of excellent quality, but the fact that it can be lifted so early in the season enables one to fill up the ground with a batch of Coleworts, late Savoys, Spinach or winter Onions. The only Potato that equals it in earliness and cropping qualities is Early Puritan, but this, especially in damp seasons, is not with me equal to the Duke of Albany in quality.—E. Burrell, *Claremont*.

The "sleeping" disease in Tomatoes.—"B. C. R." (p. 61), in his notes from Worthing, speaks of this disease as obscure in character and difficult to deal with, attributing it to an excessive amount of iron in either the soil or the water employed. The disease is in reality caused by a fungus—Fusarium lycopersici, the resting spore of which attacks the delicate root-hairs and rootlets of the plant, finally invading the whole of the roots and spreading up the stem. The treatment recommended is that directly a plant is observed to droop it should be pulled up and burnt; the earth also in which it has been growing should be removed and mixed with quick-lime. This is seemingly the only way in which the spread of this disease can be checked.—S. W. F.

Good dry season Peas.—Up to the end of June was very trying for Peas, and many gardeners felt relieved when other crops like Scarlet Runners and Vegetable Marrows became plentiful. Out of about a dozen varieties sown during May only two have produced really good crops, viz., Duke of Albany and Autocrat; these two have been our main stay the last half of July and the early part of August, bearing first-rate crops of well-filled pods. In ordinary seasons John Bull, President Garfield, Laxton's Fillbasket, and Veitch's Perfection have always proved reliable croppers in July and August, but this year on our hot soil they may be termed a comparative failure, the growth being short and weakly, with few pods that were not well filled with Peas. Not only have the two first named been a success on our light land, but also on that of a heavy character, for, visiting a friend in charge of a garden with a soil of the latter description, I was struck with the healthy and robust appearance of several rows of Peas, and on inquiry as to the variety, was informed that it was Autocrat, he further adding it was the best late Pea grown, and Duke of Albany was named as the most reliable midseason variety, thus unconsciously bearing out my own experience.—W. G. C.

Carter's Elephant Runner Bean.—This excellent variety deserves bringing more prominently before the public for its earliness, productiveness, and fine quality. Many of the runner Beans are too large and coarse and find little favour in the kitchen, but though the above variety is long in the pod (about 10 inches) it is neither thick, stringy, nor ill-shaped. As an exhibition sort it should take high rank, as its dark green colour and perfectly straight pods of handsome shape make it very attractive. Again, for home use or market its prolific character is very valuable, many of the racemes having eight and ten long Beans or pods, continuing the same all the way up the supports. Up to the present date (August 6) I have had daily pickings of very tender pods for nearly three weeks, while other varieties are only just ready for use, though sown at the same time under similar conditions.—W. G. C.

Wasps.—I was sorry to read at page 94 "W. G. C.'s" account of the number of wasps'

nests in his locality. In this district there are but few, although the great number of queens about in May led us to anticipate a similar plague to that of 1893. My opinion is that their numbers were lessened by several heavy, cold thunderstorms early in June, these occurring during the daytime when the wasps were away from home. At any rate from that date until three weeks ago I had only seen a solitary wasp now and then, although during the last week several nests have been taken. The young wasps seem small and weak, as though hatched late. Cyanide of potassium is used in this part for destroying nests, but as it is done in the daytime when numbers of the wasps are away from home, I think many of them escape. The old-fashioned plan of stifling them at night with sulphur and powder, using a piece of small piping for a gun, and digging them out afterwards has still much to recommend it. When the hole is in a perpendicular form I simply pour a little gas tar into it, afterwards stopping it with a piece of sod.—J. Crawford, *Newark*.

The Willow-leaved Gentian (G. asclepiadea).—The cultivation of this hardy perennial species entails no trouble, and it is a pity that more do not grow it. When established it spreads into thick bushy tufts, which grow 2 feet or more in height, and quite one half of each shoot is a perfect wreath of deep blue flowers. We saw some charming tufts of it at Newick Park, where it spreads about and springs up freely from self-sown seeds.

Orchids.

Angræcum sesquipedale.

The subject of the accompanying illustration is one of the most marvellous productions of the whole Orchid family, and when in good health and well flowered is strikingly beautiful. It is an erect-growing plant, the deeply-coloured, glaucous green leaves clasping the stem and arranged in a distichous manner. From the axils of these the flower-spikes proceed, and bear few or many flowers according to the size and health of the plants. Angræcum sesquipedale is a native of Madagascar, where it was first discovered about three-quarters of a century since, but apparently never introduced to cultivation, as the late Rev. W. Ellis first brought it to England and flowered it in his garden in 1857. Growing naturally on exposed and sunny positions on the tops of trees, the plants are said to be very free-flowering, but do not keep their foliage, this making the plants far from attractive. Under cultivation, however, the foliage, without being densely shaded, can be sufficiently protected from the rays of the sun to prevent its being scorched, and so lost. As I have before shown in these pages, the atmospheric conditions that obtain in our Orchid houses are by far the most important points in cultivating the large-growing, distichous-leaved Orchids, and perhaps this applies more forcibly to the subject under notice than to many others. It requires, and must have, great heat, and the light must be continuous and clear, never keeping the blinds down longer than is absolutely necessary to prevent the leaves being scorched. This advice, however, is far more easily given than acted upon; it would be easy to treat a houseful of A. sesquipedale, but not so easy to give it a congenial home where so many other shade-loving kinds have to keep it company. Still there are usually light sunny places, such, for instance, as an unshaded end to most Orchid houses, and these should be chosen. Then it thrives in a good deal drier atmosphere than is required by Saccolabiums or Aerides, and may on this account be placed where the hot-water pipes are most plentiful or nearest the boiler, such dry places not suiting many other kinds. It will not do, of course, to go to extremes in this, though if kept well supplied with moisture at the root it stands far more drought in the atmosphere and thrives better in it than any other species that I am acquainted with. The pots should be deep and well drained, the roots of this Orchid delighting to run in straight lines. Often at the end of summer the air roots will be found to have caught hold of the stage if this be constructed of wood and to have run a considerable distance upon it, and I have more than once had great difficulty in removing large plants. Of course, we cannot afford them this length of root-run, but by using the deepest pots at command, the long roots are encouraged to a certain extent. Clean Sphagnum Moss and charcoal are the best material for the compost, and the former must be induced to grow during the summer, thus adding to the appearance and health of the plants. In repotting old specimens that have got leggy and bare below, the stems should be cut off to just below where the principal roots start and kept lower in the pots, or if this cannot be done owing to the roots not being plentiful, the stem should be allowed to rest upon the bottom and the space around it be filled with drainage. Even during winter a good deal of water is needed at the roots, as these are often active at this season, differing in this respect from the majority of those of the distichous leaved kinds.



Angræcum sesquipedale. From a photograph sent by Lord Annesley, Castlewellan, Co. Down.

Although the annexed cut shows the character of the flowers, a short description of these may not be out of place. The largest blossoms are upwards of 8 inches across, very solid and thick in texture, and of a shining ivory white. The nectary is elongated into a tail-like spur, and though the specific name implies a length of 1½ feet, I have never seen one longer than 15 inches. The plants usually flower in spring, and as soon as these are over the compost should be put in order, either repotting or surfacing, as may be necessary. It is certainly the finest species of Angræcum, and has been largely the cause of bringing the genus into repute.

H. R.

Oncidium longipes.—Though a very small-flowering kind and not very showy, this little Oncidium is usually much admired when in

blossom. It never fails to flower with me in a small shallow pan in the cool house, from which it is removed during winter and placed in the cool end of the Cattleya house. The light green pseudo-bulbs are small and grow closely together, and the flowers, which occur on short, erect racemes, are each about 1¼ inches across, bright yellow, spotted and blotched with brown. The blossoms are produced during July and August and last several weeks in good condition, being very pretty for button-holes or sprays.—R.

Cypripedium Curtisi.—This handsome species resembles the barbatum section in habit, foliage, and flowers. The leaves are each about 8 inches or 9 inches in length, green, with dark blotches and lines. The spike grows about 1 foot high, and is deep purple in colour and hairy. The flowers are rather stiff in appearance, but very distinct. The dorsal sepal has a white border, the basal part lined with deep purple and green. The sepals are greenish, with purple lines and many spots, while the pouch is port wine colour, with very deep purple veins. This species requires great heat to grow it well and a shady, moist position. This was discovered in Sumatra by Mr. Curtis in 1882.

CATTLEYA GUTTATA.

The various species and varieties that resemble C. guttata form an interesting group quite distinct from the labiata kinds. They are quite indispensable to a representative collection, and several of them are extremely beautiful. Possibly the showiness of such as C. Mossiæ and kindred kinds will always make these most popular, and rightly so, for although gorgeous in colouring there is nothing coarse or gaudy about any one of them. Still the guttata group, as it may be termed, will never lack admirers, and they give a pleasant change from those mentioned above. C. guttata is an easily grown plant, quite as easy as any in the genus, and if kept to a proper routine of growth it will not fail to flower satisfactorily in due season provided the plants are sufficiently strong. It must be afforded a light position, yet not too close to the glass, and a full Cattleya temperature must be maintained. I usually repot in spring just as it commences to grow, for the roots in the compost are just then becoming active. The compost must be used in a rough and open condition, good peat fibre broken in lumps as large as a Walnut doing well for large plants if mixed with half its bulk of Sphagnum Moss and a plentiful sprinkling of charcoal. The pots should be clean and rather more than half filled with drainage, this being protected by a film of rough Moss before filling in with the compost. As the new growth advances more water will be required than at first, and when nearly finished a number of roots will be emitted from the base of the forming pseudo-bulb. These are usually above the surface of the compost, and in order to keep insects away from them and convey them to the level of the pots a little new compost should be placed under and around them. This has also the effect of strengthening the plants, and it will be found that at this season the plants will require an abundant supply of water, more in fact than at any other time. It should be noted in repotting this class of Orchid that the roots are very vigorous and soon outgrow their pots; therefore give them room and keep the leads as near the centre of the pot as possible, for although the roots grow freely enough in the atmosphere, and doubtless collect much moisture therefrom, they are safer and better covered up. The more they cling to the inside of the pot the better, but outside they are exposed to many dangers. When the growth is finished and the flowers past, less water will be required at the root, but the plants must not be dried up nor must the temperature be allowed to go below 55° at any time if it can be avoided. C. guttata in its best forms frequently attains a height of 24 inches to 30 inches, and bears at the apex of the pseudo-bulbs a couple of deep green leaves. From between these the flower-spikes spring, bearing few or many blooms, according to the health and vigour of the plant, ten or twelve on each being not uncommon. A good typical blossom would measure 4 inches or so across. The sepals and petals are yellow, tinged with green and bearing abundant small spots of bright red. This is a native of Brazil, and although introduced at several times under different names, has been known to cultivation since 1827. It is very variable, some of the best known variations from the type being

C. guttata leopardina, which does not differ from the type in ground colour, but has spots much larger and not so bright in colour. The lip is bright and pretty, the central lobe being rosy purple, the side lobe enfolding the column being pure white.

C. guttata Leopoldi is one of the most distinct and charming kinds in this section, of a robust habit and very free flowering. It was introduced from St. Catherine's Island, in Brazil, to the gardens of the late King of the Belgians, in whose honour it was named. The sepals and petals are chocolate with deep crimson spots, while the lip is deep rich purple and white. This is often classed as a distinct species, and a sub-variety, odorata, has been described as being heavily scented.

C. guttata Prinsi is a smaller growing, but chaste and beautiful form, having petals nearly or quite pure white with a few faint spots of magenta or rose. The lip is bright crimson in front and very broad and beautiful.

C. guttata Russelliana is an older variety, somewhat resembling Leopoldi, but the flowers are not so bright in colour or so plentifully produced upon the spikes. A native of the Organ Mountains, in Brazil, whence it was introduced in 1838. H.

Vanda tricolor planilabris.—This is a large flowering variety of this noble Orchid and a most beautiful plant. Although not by any means new, it is not often seen, and is really worthy of note. The habit is identical with that of the type, but the flowers are yellow with numerous brown spots upon the sepals and petals. These are very broad and of great substance. The lip is a bright rose with lines of deep purple. The plants must be strongly grown to induce them to flower, and a light position in a large spacious house suits all this section admirably. None of them require much heat in winter, this being in fact injurious, by stimulating the growth when it is not needed.

Cypripedium Lowi.—This very distinct and favourite Cypripedium is now in bloom. The flowers, large and singular in appearance, are produced in spikes of about four or five. These are variable in their colour and markings, the dorsal sepal being usually greenish purple; the petals are long and twisted, light green spotted with purple, and with purple tips, while the pouch is greenish purple and very glossy in appearance. It is a strong growing plant, bearing leaves each upwards of a foot in length, and requires the temperature of the East India house. Plenty of water must be given all through the year; therefore the compost must be free and open and the drainage good. It grows naturally on high trees in dense forests in Borneo and was introduced in 1846.

Pleurothallis Barberiana.—Where curious and interesting Orchids or plants of any kind are liked, this peculiar little species is sure to be admired. The flowers are very small, transparent-looking, with sepals like the wings of a fly spotted with brown. The stems which bear them are so fine as to be hardly discernible, and the least current of air sets the flowers in motion. It is probably from this circumstance that it has been named the Gnat Orchid. It is a very small growing plant, a native of Colombia, and is best grown in company with the smaller section of Masdevallias.

Fruit and Vegetable Crops.

SOUTHERN.

Royal Gardens, Frogmore.—I am glad to be able to report favourably of the fruit crops in this district. In the Royal Gardens we have excellent crops of all hardy fruits. Apples are above the average; in fact, this may be called a record year for this fruit. Pears are a good average; some of the trees are so heavily laden with fruit that severe thinning has to be resorted to. Peaches and Nectarines are excellent. Plums and Damsons average. Apricots fair crop of fine fruit. This has also been a record year for Cherries, the crop being the finest I ever remember. Bush fruit of all kinds is abundant and of good quality. Exception must be made in the case of Raspberries, which are small, but the crop is abundant. Strawberries excellent and of fine flavour. With reference to the question you ask as to the effect the past severe winter and the recent drought have had on the fruit trees and crops in this district, I cannot say that I have observed any special effect caused by either. At the same time I consider the question an important one, and well worth considering from the point of view you mention. Before doing so, I may perhaps be allowed to pass briefly in review the sort of weather we in this district have passed through during the past six months, noting, in passing, the great flood of November, 1894, the greatest flood of the century in the Thames valley. New Year's Day came in with 10° of frost, and the same every day for the first week, with occasional snow showers and bright, sunny days. The second week proved more winterly, with a minimum of 15° of frost. On the night of the 12th 2 inches of snow fell, and the following morning a steady thaw set in, and by the 15th all traces of the frost and snow had disappeared and mild, unsettled weather succeeded with heavy rain, which caused another flood, the second this winter. Stormy weather followed, and on the 22nd another fall of snow (2 inches). Afterwards to the end of the month the frost was very severe, the lowest reading of the thermometer being 22° of frost on the 28th; rainfall 2·60 (average 1·75). February came in with severe frost and 1 inch of snow, the cold being intense, 29° of frost on the 6th and 7th, 26°, 24° and over 20° being registered for many days in succession, and the mean temperature was probably the lowest on record in this district for February. During the first fortnight the thermometer in the shade only rose to 32° twice. The frost broke up on the 20th, having lasted from January 21, but the thaw was only partial, and frost again followed with more snow; rainfall 0·09, being the lowest here for at least twenty years. The first week in March was cold and frosty, with frequent snow showers, afterwards becoming much milder, with bright sunshine until the last week, which was stormy and unsettled, with heavy rain; rainfall 1·29. On May 1 we had 4° of frost, afterwards until the 23rd the weather was very fine, sunny and dry, with low night temperature and cold east winds, but no frost. On this date a heavy thunder storm passed over with a fall of 0·18 of rain. This was followed by a rapid rise in the temperature, and brilliant hot sunshine prevailed afterwards to the end of the month; maximum reading of the thermometer in the shade on the 30th, 84°; maximum in sun, 95°; solar glass in vacuum, 134. This proved the hottest day. The rainfall (0·36) is the lowest on record for May here excepting 1880. The fine weather of April and May continued throughout June, and with the excep-

tion of the last week in April, when 1·12 of rain fell, the drought has now lasted for three months. On the 12th and 13th we had slight frosts, but no damage was done here, though other districts suffered more or less. On the 26th a violent thunder-storm passed over, only 0·15 of rain fell here, but in other parts it fell in torrents; rainfall 0·39. Total rainfall for six months ending June 30, 1895, 6·11 inches; total rainfall for six months ending June 30, 1893, 6·2 inches. It will be seen from the above that there is very little difference in the rainfall between the memorable season of 1893 and the present up to June 30, but the fall for July up to now (28th) has reached close upon 5 inches, and has altered the complexion of the season and redeemed it in some measure from being classed with 1893. Thus within the short space of six months we have experienced a most unusual extreme of heat and cold, and the question you are asking now becomes an interesting one in view of the effect (if any) those extremes have had on our fruit trees and crops. The severe weather has, I think, proved very conclusively that the whole of our hardy fruit trees are capable of enduring any degree of cold which we may expect to be visited with in this county (at least south of the Trent) without injury. Our trees never flowered better or stronger than they did this spring, and certainly heavier crops all round than we are having this year could not be wished for (thanks no doubt in great part to the absence of the usual deadly May frosts), so that, as far as the health and condition of our hardy fruit trees are concerned, severe winters are evidently not inimical to their well-being. I must except the Strawberry from this evil — it suffered most severely—but I think the injury was caused more by the fearfully cold winds of February and March than by the severity of the frost; many of the plants were killed outright, but, luckily, enough crowns were left unharmed to produce an excellent crop. Another point the late severe winter has demonstrated is the perfectly useless and unnecessary work of covering Vine borders with material of any description against rain and frost in winter. Ours last winter had scarcely any covering on them at all, and certainly our Vines never started better or carried better crops than they have done and are doing this summer. I am now convinced that this protection of our borders, as it is called, is a useless waste of material and time. I remember on one occasion speaking to the late Mr. Wm. Thomson on this subject, and he assured me that he had discontinued the practice for years as being useless. These remarks only apply to mid-season and late Grapes.

I wish I could speak as favourably with respect to crops in the vegetable garden. Here, I am sorry to say, the effect of the severe weather has been most disastrous. Broccoli, Brussels Sprouts, Spinach, Parsley, Lettuce, Globe Artichokes, Coleworts, &c., are killed, and the garden at the end of March appeared as bare as a "fallow field," and I am afraid that no remedy can be suggested which will be effective to prevent the destruction of our vegetable crops by those occasional visitations of severe frost. As regards the drought, the chief lesson, I think, this has taught gardeners is the paramount importance of thorough cultivation in the shape of trenching, deep digging, and the liberal application of good farmyard manure where it can be had, with liberal surface mulchings of manure. By endeavouring to pursue this practice here we have suffered very little from the drought.—Owen Thomas.

Claremont, Esher.—The fruit crop on the whole is very satisfactory, although, taken individually, one or two kinds are thin. Apples are not the heavy crop we were led to expect, a continuation of very drying winds and the total absence of moisture all through the blooming season being, I think, answerable for a rather indifferent set. Useful sorts, notably Keswick Codlin, Warner's King and Wellington, King of Pippins, Blenheim and Cornish Aromatic respectively in kitchen and dessert kinds are very plentiful. The Apple maggot was troublesome, some places especially having a very severe visitation. Apricots are thin, the failure here being doubtless attributable (the trees being on a west wall) to the damp sunless summer of 1894 and to a consequent imperfect ripening of the wood. Cherries, both dessert and Morello, were and are carrying capital crops. Black fly was troublesome early in the season, but we have kept it well in hand by the aid of quassia extract. Plums are a good crop, not so heavy as last year, but a very good average all along the wall. I never remember a finer set of Peaches and Nectarines; the fruit had to be removed in thousands—in fact, hard thinning has been practised to enable the trees to come through the long spell of drought without suffering to any great extent. Aphides and red spider were troublesome early in the season, but, as in the case of the Cherries, vigorous applications of the quassia extract soon settled the unwelcome visitors. Pears are not up to the average, the crop on cordon, pyramid, or old wall trees being very partial. Figs were cut to the ground despite a covering of mats, and the crop is consequently *nil*. Strawberries were a capital crop, early varieties being very fine; later sorts were, however, considerably handicapped by the protracted drought and the season was very short. Raspberry canes in the open were considerably damaged and the crop was proportionately small; in sheltered situations, however, there has been plenty of fruit. All other small fruits are far above an average, the crop of Gooseberries and Black Currants especially being very heavy. As may be inferred from the above notes, only two fruits, *i.e.*, Figs and Raspberries, were any the worse for the exceptional spell of weather experienced in February, and in the case of the latter, only where the canes were fully exposed to the winds. The long spell of dry weather has, however, seriously affected many things, and all the damage is not as yet apparent. With the possibility of a drought, I put a good mulching of heavy manure to all trees about the beginning of May, and gradually, rain being still conspicuous by its absence, watered as much as I possibly could all the choicer fruits that were carrying heavy crops, also Strawberries and trellis Gooseberries.—E. Burrell.

Syon House, Brentford.—In this district most of the crops may be termed above the average. I do not think any trees suffered in the least from the severe weather last winter; indeed, I think it was a gain, as though the blooming season was retarded, it was the better for the trees, there being no late frosts to affect the bloom. Peaches and Nectarines are a very full crop, the trees free of disease and aphis and making good firm wood. The early American kinds, such as Amsden June and Waterloo, were gathered the middle of July, thus showing that severe weather has not retarded growth; the fruits were not quite so fine as in previous seasons, but later varieties promise well. Lord Napier and several of the newer Nectarines are very fine. Apricots are not a heavy crop. The trees are wonderfully healthy, and there has been less loss of branches than in previous years, showing that severe weather is not harmful if we get a dry winter. Cherries have been abundant and good; such kinds as Governor Wood and Bigarreau Napoleon have furnished grand crops and the trees are healthy. Black fly was troublesome just as the fruits were colouring, but by cleansing freely the trees are now in splendid condition; Morellos are carrying heavy crops of good fruit. I had one of the best Strawberry seasons on record. It is only fair to add I rely mostly on young plants, mulching early and watering freely. Royal Sovereign and Latest of All were the heaviest croppers, and good flavoured fruits of Noble were gathered the first week in June from raised south borders. Raspberries have been a full crop, and where well mulched and fed the fruits were large Superlative is the best. Other small fruits, such as Currants, Gooseberries, have been plentiful and good and very clean. Plums are an average crop, a few kinds bearing very freely; standard and bush trees are bearing more freely than wall trees. Apples and Pears are all one can wish, and though the severe drought has affected the Apples, causing some to drop, I trust the genial rains will assist in swelling up late kinds. All varieties are bearing well and the trees will benefit by being thinned somewhat. All of the Codlin type are cropping well and most kinds may be said to be a good average crop. Early Pears, I fear, will not be large; later kinds promise well. A few kinds, such as Beurré Bachelier, B. Diel, B. Superfin, B. Sterckmans and B. Clairgeau are above the average.

Vegetables have been good and plentiful; a few crops suffered badly from drought, Peas being a shorter crop than usual. Early Cabbage, though a little later, was very good and there were no losses. Marrows and Beans are abundant. The early Potatoes suffered from drought, being smaller than usual, but late kinds promise well. Cauliflowers and Broccoli have not been so good as in former years; the severe frost crippled some of the hardiest forms of the latter, and drought was hard on the summer Cauliflowers.—G. Wythes.

Wrotham Park, Barnet, N.—The winter here, or rather the latter part of it, was very severe and prolonged, lasting up to the end of the first week in March, but we escaped in a great measure the late spring frosts, as we lie very high. The drought too has been both long and severe, due also in some measure to our elevated position, many times there being rain round about us, but none falling here, the total amount of rain registered here for May and June being only 0·75 inch. Apples above the average. Pears average crop. Plums and Peaches below the average. Cherries below the average, except Morellos. Apricots good. Strawberries above the average, although after the first picking the rest were small and inferior, owing to the drought and heat. Red Currants good. Black Currants and Gooseberries average. Raspberries under average; plenty of bloom on the canes, but it set either very imperfectly or not at all, the dry hot weather being against it. Filberts and Walnuts over average. Figs suffered most from the severe frost; none of the other crops appear to be much affected by it. The light crops of Plums and Peaches, I think, were owing more to the heavy crop each carried last year, and the wood not perhaps being as well ripened as it ought to have been through the mild, damp autumn and early part of the winter. Kitchen garden crops suffered severely, whole breadths of Broccoli and Savoys being quite destroyed, while very few plants of Brussels Sprouts and Curled Kale survived. Phœnix Kale stood best of anything here and was invaluable. Three parts of the autumn-planted Cabbage were killed and had to be filled up with spring-sown plants. It was quite the middle of March before the frost was out of the ground. Carnations also suffered much, many clumps being killed outright.

Potatoes are small, though there are plenty of them to a root. Peas came in earlier, but soon failed, and the supply at present is very limited, many of the rows being badly affected with mildew now; the later sowings may be better now we have had a thorough soaking of rain. Cauliflowers have been poor and small, Spinach quite a failure for some weeks. Carrots, Onions and Beet all are smaller and more backward than usual, but there is plenty of each. Brussels Sprouts, Cabbages, Kale, &c., are later, owing to the fact that the plants did not grow very fast in the seed beds, and also that only a certain quantity could be put out at a time, as they had to be watered daily for some time after planting.—G. Ringham.

Hanger Hill House, Ealing.—Apples are a good crop. Pears generally are about an average, except Louise Bonne of Jersey, which with me is a failure. All kinds of bush fruits are abundant and very fine. Strawberries an average crop, but soon over on account of the drought. The latter with me was the only crop that suffered from the recent drought. Peaches and Nectarines are very good. I gathered a dozen fruits of Alexander on July 10 of good flavour. Plums, Damsons and Cherries are a good average. I never remember seeing fruit trees cleaner and

freer from insect pests. Fruit trees in general passed the late severe winter exceedingly well, especially after such a mild autumn and early part of winter.

Vegetables of all kinds are plentiful; winter stuff of the Brassica tribe could not look more promising.—D. Cooper.

Kingston-on-Thames, Surrey.—Having special duties which take me during the summer and autumn all over the county of Surrey, I have had ample facility for seeing the general condition of the fruit crop. Taking it on the whole, the present season may claim to rank amongst the best, for the general crop is, or has been, first-rate. It is somewhat remarkable, perhaps, casually looked at, that such a fine crop of fruit should have resulted after so comparatively cold and wet a season as was the summer of 1894. We, however, have to remember that most of the wood which carries fruit is formed two years previously, so that in reality we may be said this season to have been enjoying the benefit conferred on trees by the hot weather of 1893, the considerable rains of 1894 helping to plump up the buds, whilst the singularly abundant sunshine of 1895 did so much to help swell the fruit. It is true there were, prior to the advent of the rains, complaints that Apples were falling, but the effect was advantageous rather than otherwise, for there is such an immense crop of Apples this year, and almost everywhere severe thinning was a blessing rather than otherwise. The rains came in time to help swell up the fruit on Apple, Pear, and Plum trees, so that we may well look not only for great abundance, but also for good, clean samples. That the present is essentially an orchard tree season there can be no doubt. Surrey is not a great fruit-growing county for market sale, but it is a splendid Apple, Pear, and Plum county all the same, and crops are heavy generally. In gardens, on bush or pyramid trees, especially those on the Paradise and Quince stocks, the trees may have been less able to withstand the drought than large, old trees. Still there seems to be everywhere such an abundance, that it is not possible to find room for complaint except in restricted cases. Hessle Pears are cropping most wonderfully, so also are other common sorts. It seems a pity that trees as healthy and robust of better sorts cannot be produced, but these qualities are not usually found associated with high table quality in Pears. Plums are more partial, it is true, in some districts literally breaking down the trees, in others quite thin. That is all the better, as no crop results in so much loss and dissatisfaction when we have a glut as do Plums. Sweet Cherries have been most plentiful and fine. They also ripened well, the dry weather suiting them admirably. Morellos on standards or on walls have been, and are, a wonderful crop also. Walnuts are a grand crop, and small Nuts everywhere very abundant. Raspberries have been good where the canes were spared by the frost. In many places, however, they were killed back by the severe weather in the winter. I saw at Ashtead Baumforth's Seedling giving some of the finest fruits I ever saw, not even excepting those of Superlative, also in places very fine. Bush fruits, Gooseberries, Red, White, and Black Currants, have all been wonderful crops. It seems impossible they could ever have been heavier. The fruits also were fine, in spite of the drought, and ripened well. Even with dryness at the roots, sunshine plays a very important part in fruit production. It may be difficult to specialise sorts, but Whinham's Industry among Gooseberries, and Red Cherry and Baldwin among Currants, have been exceptionally fine. Strawberries, too, in spite of the drought proved to be a capital crop generally—indeed, with many could hardly have been better On walls, Apricots were none too plentiful, but there are plenty of Peaches and Nectarines. Thus it is seen that, taking Surrey as a whole, it has been a fine fruit year. The result is largely to encourage those who propose planting fruit areas, for in such a highly favoured county they have but to wait with patience to find an assured reward.—A. Dean.

Coolhurst, Sussex.—The varieties of Strawberry that bore well were Vicomtesse Héricart de Thury, Sir Joseph Paxton, President, Noble, and Keens' Seedling. British Queen, Loxford Hall Seedling, Waterloo, and Eleanor bore but very indifferently, as they have done in former seasons, and will now be discarded, as they were grown side by side, receiving in every way the same treatment as those that have carried splendid crops. Indeed there are few varieties at the present day of more value than the three first-named sorts, taking all in all, for forcing or out-door culture. Vicomtesse comes in well for dessert among the first earlies, and when the fruit gets smaller it is excellent for preserve making. Sir Joseph Paxton was finer than usual, every berry being large and beautifully coloured to the very point, a thing that does not always occur in ordinary seasons; but the great heat of June had a most beneficial effect on the fruit, there being moisture at the roots, retained by heavy mulching in the autumn, and then being well watered when in flower. President bore heavily too under similar conditions of culture. Noble also bore large well-coloured fruit, but soft and flavourless. Keens' Seedling is not so satisfactory in this garden as I have seen it in Scotland, where it used to hold a foremost place in the list grown. Our plants did not suffer from the severe winter, there being a dry open leafage, the result of a full autumn growth, which no doubt preserved the crowns, which broke away freely and were healthy all through the cropping time, with not the slightest trace of red spider. Black Currants were an excellent crop, being on a north border on deeply worked land, Black Grape, Baldwin, and Carter's Champion being especially fine. Amongst the Red Currants, Raby Castle has been the best, being large in berry and beautiful in colour. Raspberries have been, on the whole, much under an average crop, the canes of most varieties being nearly killed to the ground by the severe winter, and consequently there was no wood to carry a crop. These require deep cultivation of the ground before being planted, and then heavily mulched in the autumn to retain the winter's moisture. Autumn mulching is of much importance at all times, and doubly so when an unusually severe winter comes, followed by an excessively dry summer. Cherries, as a rule, do not seem to thrive here, for although young trees have been repeatedly planted, with a change of soil, still they will not grow in a satisfactory way. Plums are thin, but these bore heavily last season, and were no doubt to a certain extent exhausted, and the cold, wet autumn of 1894 did not give the trees much chance to recoup their strength to form fruit buds for this year. Angelina Burdett, Belgian Purple, Blue Gage, Coe's Golden Drop, Rivers' Early Prolific, Old Green Gage, Jefferson, Pond's Seedling, and Victoria are the varieties with most fruit this season. Blue Gage and Belgian Purple can be always relied on for a crop, and both are excellent Plums. Pears are thin all over with one or two exceptions, and one of these is that excellent Pear Pitmaston Duchess, which bears well every season. I am much disappointed with that fine Pear Doyenné du Comice. I have tried it in all forms, on the Paradise stock, the free stock, on the wall, and as a standard, all to no purpose. The soil here is a deep clayey loam, suiting fruit trees fairly well in general. Apples are plentiful, some varieties much more so than others, Cox's Orange Pippin bearing freely, and fine fruit too. Blenheim Orange, Ribston Pippin, King of the Pippins, American Mother, and many more are bearing full crops, and the fruit is likely to be of a good size now that the trees are getting moisture at the roots. Apples in this neighbourhood are generally a heavy crop, but are likely to be small. Filberts are a good crop; Medlars better than they have been for several past seasons. Walnuts are plentiful and likely to be large. Indoor fruits are good.

Vegetables have not had the best chance, owing to the great drought of May and June. Cauliflowers poor, being open and thin. Peas got hard in a few days and were soon over; the late ones are now likely to grow too much to straw, so that taking the year all through I fear it will not be one of the best of Pea seasons. Carrots doing well. Onions taken with the maggot. Potatoes quite free of the blight as yet. Early Puritan has been of excellent quality. This is altogether a splendid second early Potato. Lady Truscott is another fine second early, the quality resembling that of Puritan.—A. Kemp.

Rickmansworth Park, Herts.—The fruit crops generally have been good. Pears fair, Strawberries plentiful, but small, Gooseberries and Currants very good. The canes of our Raspberries were killed by the frost, but we are gathering some good fruit from the young canes, which are only from 1 foot to 18 inches high. The Morello Cherries are plentiful.

Peas and Cauliflowers have stood the long drought well, a fact I attribute to the deep working of the ground. Our land is very light and gravelly.—Adam Duncan.

Durdans, Epsom.—The fruit crop here is fairly good considering the dry weather we have had up to the middle of July. There is still an average crop of Apples left on the trees, although a great many dropped off through the drought. Pears are rather under an average, Plums an average crop, Morello Cherries a good crop and the trees quite free of black fly with which in former seasons they have generally been infested. Strawberries have been a good crop, especially John Ruskin, from which we commenced gathering on May 30. Currants and Gooseberries have been an average crop, Raspberries rather deficient; the dry weather has told more on them than any other fruit crop. The Walnut trees are carrying a very heavy crop.—John Barclay.

Garden Flora.

PLATE 1029.

SCILLA SIBIRICA MULTIFLORA.

(WITH A COLOURED PLATE.*)

The Siberian Scilla has long held a foremost place in gardens as an early, easily grown spring-flowering bulb, and it was a popular flower long before the Chionodoxas, which latterly have been strong rivals to it, were introduced. The Chionodoxas, free and beautiful as they are, do not, however, possess that rich depth of deep blue which characterises and makes the Siberian Scilla such a bright and effective spring flower. Although its near ally S. bifolia is rather sportive, and the different forms of it vary in merit and beauty to some considerable extent, S. sibirica has hitherto shown little tendency to vary, but the variety illustrated in the accompanying plate differs in a marked degree in several ways, and is altogether a charming acquisition to spring flowers. Last autumn some bulbs were sent us for trial by Messrs. G. C. van Meeuwen, of Haarlem, under the name we here give, a name doubtless suggested by the remarkably free-flowering character of the variety, but at one of the spring meetings of the R.H.S. it was shown under the name of S. sibirica taurica, and was said to have been thus named by Mr. E. Whittall, who found it upon the Taurus Mountains. Its merits and beauty exist not only in its free blooming, but it is nearly three weeks earlier than the ordinary form of S. sibirica, of a distinct and rather lighter shade of blue, and even more robust, its long-stalked, many-flowered spikes being borne well above the ground and its own leaves. If one looked for the faults or failings of S. sibrica, the chief one would be found in its

* Drawn for The Garden by H. G. Moon at Gravetye Manor. Lithographed and printed by Guillaume Severeyns.



SCILLA SIBIRICA MULTIFLORA

short-stalked spikes, but such a charge cannot be brought against the variety here figured, which grows tall enough to gather, and is a truly charming acquisition in many ways. The plate appears at an opportune season, so those who desire to give it a trial can do so at once. It is equally, if not more, deserving of the esteem that has so long been accorded to the older form, and we shall be surprised if it does not take precedence of the two as soon as it becomes generally known.

The Week's Work.

KITCHEN GARDEN.

Late Peas.—These, always a precarious crop, have of late years been rendered more so by our very variable autumns; hence the necessity for more pains in their culture. Valuable as a supply is through October, these late sown rows are very often neglected, especially where tall stakes are scarce. Vigorous growers, such as British Queen and Ne Plus Ultra, will in dry seasons soon drain the ground of all moisture, mildew making its appearance as soon through drought as through wet and sunless weather. Where ordinary stakes are in use and the haulm has ascended above them, rather cut it off at that point than allow it to fall down and so smother the young pods and blossom. By all means mulch thickly and give a copious drenching once in ten days with liquid manure, and where mildew has actually set in means must immediately be taken for its extermination. The recipe published in The Garden last year is a most excellent one, and rarely fails to banish it if applied in time. It is as follows: To 3 lbs. of unslaked lime and 4 lbs. of sulphur add 1 gallon of water, and boil all together for 40 minutes. After settling, pour off the clear liquid and bottle. Use in proportion of from a quarter to half a pint in 3 gallons of soft water. Where the supports, owing to a scarcity, were placed too far apart, and the haulm is in consequence falling through, place some stout rods horizontally along the rows, tieing them to the uprights here and there. The growth of the dwarf round-seeded varieties for a few very late dishes should be syringed with the mixture as a preventive against the disease, mulching and liberal supplies of root moisture being also attended to. Any odd rows having no more eatable Peas left on them should at once be pulled up, the ground hoed, and after being stirred and soaked, planted with Coleworts either of the Rosette or Hardy Green section.

Scarlet Runners.—Although rain has at last fallen in most places, the quantity is insufficient to penetrate to the lowermost roots of many crops carrying abundant leafage. Few subjects draw the moisture from the soil sooner than Runner Beans, and nothing feels the evil effects of drought sooner. Hence the necessity for renewing the mulch on each side of the rows of those just coming into bearing, to say nothing of those now in full yield; and as on account of Peas becoming each week scarcer, their nearest substitute, Beans, will become more and more valuable, close gatherings liberal manurial drenchings, together with occasional baths from the garden hose, administered at eventide, must be followed up, even if hoeing and cleaning have to be temporarily suspended in order to accomplish it. Those grown on the topping system must be pinched and repinched as soon as fresh growth occurs, and where it is desirable to save pods for seed, the smaller ones in close proximity to them should be pinched off in order that the former may appropriate all the sap and attain to a good size before being harvested.

Asparagus.—It is not yet too late to give another soaking of liquid manure or to apply some good artificial stimulant to this vegetable intended for lifting to force, and if the advice given at planting time to allow a 2-feet space between each three or four rows was followed, there ought to be no difficulty in carrying out the work. If mulching also was practised when the plants were small, enough of that will still remain to preserve the moisture about the roots, and should there now be any weeds showing themselves, a little salt added to the manure will kill them. Although old permanent beds of Asparagus are now rather too densely covered with foliage to admit of getting amongst them, yet with a little pains the manure may be scattered broadcast, finding its way down to the roots through the force of autumn rains. This also has the effect of enticing a number of fresh fibres to the surface, which if slightly protected by a little rough litter in winter will lay hold of any actual top-dressing of loamy compost given in spring.

Frame Cucumbers.—More care and attention must now of necessity be paid to Cucumbers growing in ordinary frames on manure beds, the nights and mornings now being much cooler than heretofore. The heat from the bed having for the most part declined, a renewal of it must be effected by building up fresh manure linings from 3 feet to 4 feet in width, allowing the same to come up to within a few inches of the frame top. Night coverings, moreover, must be given regularly, and earlier closing, say 2.30, on sunny afternoons practised. If these precautions are not taken, a sluggish root action coupled with stem canker and general debility will immediately follow, the fruit even if it sets failing to swell. Syringing must likewise be reduced to a minimum, choosing fine, sunny afternoons for the purpose. Keep the young growths well thinned out to admit abundance of light and air. Avoid overcropping.

Earliest Seakale.—Where the desire is to have this very early and a special sunny, open position was accorded the plants, they should now be gone through and freed from all weeds and rubbish, including decaying leaves, a maximum amount of light and air being necessary for the early ripening of the crowns. If occupying a sloping border and the plants seem in consequence to be rather dry at the roots, I would not advise watering now, as such might prolong the growing season, and it is not so much the size as the earliness of the first forced batches that is so important. All beds of Seakale for whatever purpose intended ought also now to be looked through, and if any more side shoots are visible, remove them.

Midseason Tomatoes.—These plants now bearing ripe, ripening and green Tomatoes—the last in various stages—will require a little more consideration in order to give the fruit the best chance of finishing off with a respectable flavour; especially is this the case where the fruit is eaten in a raw state. Where practicable, turn on a little fire-heat to create a buoyancy in the atmosphere, and avoid afternoon damping down. This treatment is also needed to prevent the fruit from cracking badly and to ward off the disease, which is always encouraged by a clammy atmosphere. If the plants are fairly strong and have been well mulched, the use of manure water, especially in unheated houses, had better be discontinued. Any yellow or old leaves may be shortened back to render the circulation of air more thorough.

Succession plants.—I have now a batch of plants bearing very small green fruit and bloom trusses. These occupy 8-inch pots, the limited space in which promotes a moderate and consolidated growth, just what is wanted for plants late in the season. These, although in an airy span-roofed house at present, will be removed in October to an intermediate one and stood along a back wall which receives plenty of light. They will there throw a most useful lot of fruit in October and November. Owing to these being in small pots they will benefit by a little feeding; this will be given in strict moderation, for the same reasons as quoted above. Small plants for actual winter cropping now being brought forward must be given all the light and sun possible, a sturdy, although by no means a rank, growth being especially necessary at this advanced period.

Watering crops.—All spare time will now be best utilised in giving supplies of farmyard liquid to aid growing crops, except where from over-rich land these are too rank already. Newly-planted Coleworts should first receive attention, following on with late Brussels Sprouts, Broccoli and Kales. Celery will be much benefited by a supply of good rich food previous to the first earthing up being given, Globe Artichokes, Vegetables Marrows, Self-protecting and Autumn Giant Cauliflowers, and even pickling Cabbages deriving much good from one more good soaking.

Pickling Onions.—Where these have been grown on poor land and are now giving way they may be drawn and removed to a cool, dry shed or vinery at rest to finish off previous to being pickled.

J. Crawford.

FRUIT HOUSES.

Melons.—These will now require more than ordinary attention, as with shorter days there will be less sun heat, which is so necessary for the welfare of the plants. With pot culture the cultivator can manage to give the plants the desired treatment at the roots, as in dull, sunless weather there will be trouble with canker owing to the sudden changes of temperature, excess of moisture, and overfeeding. A long period of hot, dry weather will have given what may be termed mid-season plants a good start, and they will now be finishing the crop, and at that stage require more care, as when the plants fail, the fruit, though fully developed, is poor and flavourless. In dull weather water must be given sparingly, and feeding should be discontinued when the fruits cease to swell, late feeding causing poor flavour and in many cases the cracking of the stems and premature decay. If the plants are growing on manure very little moisture will be required at the finishing stage. Overhead syringing must also cease in such houses. I do not advise premature drying off, as this affects flavour. Much depends upon the means at hand to finish the crop. With plenty of heat the plants should be kept healthy till the fruits are cut. Ripe fruits can be placed in a drier house when they show signs of cracking at the stem, and when ripened up on a warm shelf are much better flavoured. Should the house favour late growth and fruits take longer than usual to finish, it is well to air freely during the day and keep up a good temperature by fire-heat, 80° being none too much. With fire-heat there is difficulty with red spider, and it will be necessary to use sulphur freely, well coating the pipes and syringing the under sides of the leaves. I am aware this does not add to the appearance of the plants, but it need not remain long on the plants and fruit, it is soon washed off. For canker apply such remedies as freshly slaked lime with a portion of sulphur. Lime, sulphur, and fresh Portland cement will also check the disease if applied before the stem is too much decayed.

Latest Melons.—The plants will now be covering the trellis freely, and though good progress will have been made, the cultivator will have to take more care at this season to secure a good set and prevent crowding of foliage. It is well to aim at a thin crop, and to do this it is best to set the first flowers, stop early, and get a strong growth before the days get short and sunless. Plants in pots will take abundant supplies of food, as the top growth will be sturdier and the roots, being in a confined space, will need more nourishment. Plants with fruit just set should be top-dressed, using such aids as bone-meal and rough turfy loam. Keep the collars free of manure or rich food, and should canker (which is more troublesome with late plants) make its appearance, lose no time in applying the remedies advised for fruiting plants. Mildew will also have to be guarded against, and the free use of sulphur is the best remedy. Maintain a liberal temperature, allowing the thermometer to run up freely during sun-heat, closing at 1 p.m. and giving air sparingly.

Strawberries for forcing.—Those who force early will now have their plants potted and the roots will be working freely. To plants in this

condition liberal supplies of moisture may be given and all runners cut off. I do not advise feeding till the plants have well filled their pots with roots, as I think early feeding tends to produce side growths or more crowns than the plants should be allowed to mature. Some varieties are much worse than others in this respect; for instance, Vicomtesse Héricart de Thury splits up badly into several crowns if not checked. Early-potted plants placed thickly together when potted should now be given more room, the plants being frequently moved to prevent rooting through and to give them more light and sun all round. In feeding it is well to begin with very small quantities. Later potted-up plants will need more care than usual, on account of the heavy rainfall since the plants were placed in their fruiting pots. In many gardens late potting this season will have been unavoidable owing to the scarcity of runners. In placing late varieties in their growing quarters it will be well to give as much room as possible, and thus assist in securing quick root action, as the sun will have more play and the soil will dry up much quicker. A hard base should be given the pots, as worms soon do much harm to plants stood on walks or beds of soil. At this advanced period, failing a hard coal ash bottom, it will be advisable to use boards or slates to prevent the ingress of worms. Plants only just potted up or ready to pot should have a size smaller pot than earlier or stronger plants, and if given the best position possible, they will yet make fair progress and grow till stopped by frost. Of course such plants will not be good for early forcing, but will give a good return for May supplies of fruit next season if the roots of the plants are well protected during the winter.

Vines in unheated houses.—In favourable districts many Vines are grown in structures not heated, and up to the middle of July the weather was most favourable, but with much rainfall and loss of heat from want of sunshine, there will be trouble with mildew, as in many houses the berries were colouring when the change of weather occurred. When mildew appears it is well to take the disease in hand at once. Use sulphur freely, as the fruit will soon be spoiled if the pest is allowed to spread. A dry atmosphere must be maintained, all moisture being dried up early in the day, allowing a free circulation of air, and preventing drip or rain from entering the house. It is also well to remove any lateral growth, as by shortening this more air and light are admitted, and the walls may with advantage get a dressing of sulphur.

Worn-out Vines.—The above may include both old and young canes, as the latter are frequently much overcropped in their youth, with the result that the berries shank and the fruit does not keep long. With canes not too old and in outside borders much may be done at this season by renewing borders, partially lifting and preserving the small fibrous roots, and cutting back the old ones. The work should be done quickly, and the materials for the border prepared in advance. The old border up to the healthy roots should be removed with forks, and the drainage made good before the new soil is added. It is advisable to do the work piecemeal, so as to only expose a few roots at a time. In replacing the new soil it should be made as firm as possible, the fibrous roots being evenly spread out and kept near the surface. Avoid using animal manures. These may be supplied next season if required in liquid form. It is not necessary to make up the new border to the same extent as before. It will be best to make it up in sections at twice or more, according to the size. With Vines treated thus a little more attention will be required for a short time, the top growth being assisted. Keep the house close for a time, syringing several times daily, and should the Vines show signs of flagging, shade lightly during bright sunshine for a short time. Maintain a moist atmosphere till the Vines have recovered from the check. In a few weeks, more air may be given, the shading discontinued and syringing also, the Vines being gradually rested. There should be no attempt to force such canes next season and they should be cropped lightly. G. Wythes.

Rose Garden.

AMONG THE ROSES.

After the much needed rain, and this followed by warm weather once more, Roses are putting on a good promise of late autumn bloom. With the vast improvement among these flowers of late years we now have but very little break of bloom from the end of May until the close of September, often much later than this, but that depends entirely upon the autumn weather experienced. Both Hybrid Perpetuals and Teas are still in almost as full beauty as during the latter part of June—indeed, the latter are full of growth and bloom, while we get most delightful shadings in many varieties. Mme. Berard, Mme. Falcot, Marie van Houtte, Dr. Grill and others are far richer in colour than during the hotter and brighter days of early July. Gloire de Dijon, too, is as bright as we find Bouquet d'Or in midsummer. Eclair and a few of the dark velvety varieties, such as Duke of Edinburgh, Prince Camille de Rohan and Xavier Olibo, produce grand flowers from the shoots made from the base since the early summer bloom was secured. Cool nights and dewy mornings aid these in point of depth in colouring, and if cut early in the morning they will stand quite twice as long in the house as summer flowers.

The change of weather from hot and dry to wet and cold for a period of two or three weeks has brought on mildew, but I am pleased to say that so far as my plants are concerned the new growths now forming are but little attacked. If we except the first part of our budding season, when the drought was not favourable to the lifting of the bark upon the stocks, I do not think we ever had a year in which there were better prospects of a good take. The buds inserted early will need loosening in all cases where a strong tying material was used, or the extra rapid swelling after rain will cause serious constriction. Both standard and dwarf stocks that are not already budded will now lift in grand form. Many that were not sufficiently strong before are fast gaining the desired size and strength, and this is particularly noticeable upon hedge Briers used in half and full standard forms. It will be well to go over these once more and bud those shoulders that were not far enough advanced previously. In many cases I have noticed plants of these have broken weakly, but as they are now making amends for this we must look over them again. Our dwarf stocks in more than one instance upon light and naturally dry soil were so weak that there seemed little prospect of being able to insert any buds this season, but their recent progress has been remarkable. I do not care for a strong stock to bud upon, as I have never had such good success in the union of bud and stock.

Many of the new growths now breaking so strongly from the base of dwarf Roses will need a stout stick as protection against wind-waving. These are of so much value that we may well pay a little extra attention to their preservation for next season's use. Last year I budded two each of the Hybrid Sweet Briers upon the Manetti and two upon the cutting Brier stock. They were in the same row and had exactly similar treatment, but in every case, except Lady Penzance, those upon the Manetti stock are considerably the stronger. One of the most pleasant features of my Rose garden is the delightful perfume thrown off by the charming Briers, which are soon to be increased in number and variation of colour. Some of the newer ones are very promising, but none more so than Jeannie Deans.

Once more do we find the forms of R. rugosa among the most pleasing and showy of all Roses. None are more constant or certain to please than these; they are never troubled with mildew or red rust—two of our worst enemies in the Rose garden. The hot and dry weather made little difference to them. Early this season a new rugosa from M. Bruant was figured in these pages. I have grown it this season and am much pleased with its distinctive character. M. Bruant advised me to cultivate it as a standard, and although I have not yet been able to get it in that form, its present appearance points very clearly to its adaptability for tall or short standards. The growth is equally vigorous, but not so stout as in rugosa rubra and r. alba, having a tendency to droop and developing this much more as the heavy trusses of berries mature. These are by no means so large, but far more numerous than those of the type. Instead of three to seven or eight, here I have from twenty to forty. It seems equally free from disease and is a great addition to this class. If we can improve upon the blooms and still retain the disease-resisting as well as the great value for town gardens found in r. alba and rubra, this class will rapidly become better known and appreciated.

The constant stirring of surface soil is not sufficiently practised after our first crop of bloom is past. For example, the recent heavy rains have beaten down the soil more firmly than many of us imagine, and it is at all times beneficial to keep the top soil loose and open to atmospheric influence. Even where the plants are mulched between with short manure I would prefer them to be worked among as far as possible. It has a great tendency towards healthy growth, keeps the whole plant in trim, as it were, and has much to do with ripe, well-matured wood for passing through the coming winter.

After these showers, with the ground so warm and genial, we can be almost sure of a successful strike of cuttings if placed on the partially shaded side of a hedge or fence. Use wood that is quite half ripe and insert it three parts of its length. A light, porous soil is best, but one of a heavy nature may be used if we are careful to place a little sand or worn-out potting soil at the base of the cuttings. These will root at once and be practically established before winter. Upon more than one occasion when very short of stocks for grafting I have made some cuttings early and inserted them in sandy loam. They soon rooted, were lifted in November, and potted ready for use by the end of the year. R.

Autumn prospects.—Seldom have these been more promising. With the ground very warm and dry, followed by copious showers, Roses are now bursting into new growth of a pleasing and healthy character. This, as usual, is more especially the case with Teas and Noisettes, also many of the Hybrid Teas. Viscountess Folkestone and Caroline Testout are again a mass of flower; indeed, as regards freedom in flowering I see little if any choice between these and the true Teas. The early growths of climbers, such as W. Allen Richardson, l'Ideal, &c., were so checked by the drought, that we have a much better matured wood than usual, and these are now fast coming into bloom again. Hybrid Perpetuals and the old favourite Bourbon, Souvenir de la Malmaison, are

also promising. On a wall the climbers are again coming into bloom, while the dwarfer growers that are placed alternately between these are already gay. Sunset, Marie van Houtte, Mme. Falcot, Anna Ollivier, Niphetos and others of like growth are equally as full of bloom as at the end of June. The careful and constant removal of all faded blooms has much to do with a succession of flower, and with a little surface culture there is no reason why we should not have Roses in greater profusion through the late summer and autumnal months. Teas and Noisettes are of course the chief bloomers; in fact, every season we see more to admire in these classes, and with the vast variety now to be had they are undoubtedly the most useful section of all.—R.

ROSES IN POTS.

To have these in the best condition during the coming winter we must commence now. Pot Roses in most cases have made good growth. It now becomes absolutely necessary to get the wood efficiently matured, otherwise there is little prospect of successful forcing at a time when we are receiving very little aid from the sun. I prefer ripened wood to start with, but, as usual, shall grow a few of the later worked plants without a check, and so get those flowers that would otherwise be caught by frosts. Some of our pot plants in the open are almost ripe enough already, but others are making a succession of healthy young growths, and will flower again before needing house room. At all times, in a batch of pot Roses, we can select plants in two different stages of growth. A few plants, kept as backward as possible upon the north side of a wall or hedge, will generally be breaking into new growth too late for safe blooming in the open, and if these be housed at the same time as the ripened plants are started, they will give us a welcome crop just previous to the latter. In ripening our pot Roses, we need do so in as steady and natural a way as possible. If too hasty, the wood is not so sound as it should be, nor can we avoid considerable injury to the fibrous roots when artificially ripened by withholding water too closely. Much the best plan is to partly plunge the plants outdoors, this keeping the bottom soil fairly cool and free from a parching drought. Worms will penetrate unless we take due precautions. But this is so easy and simple, that there is no excuse for trouble in this direction. Simply place a small handful of soot at the bottom and stand the hole of the pot on this. No worms will come through, and you avoid the risk of stoppage sometimes found when a pot fits too true upon a piece of slate or other substance. When the pot is lifted, the soot will easily wash off during the usual cleansing of the pots before housing for forcing. Plants that were under hard forcing through the past winter have, of course, now been outside for some time. If potted up again now and then replunged, we shall soon have them starting into growth ready to produce useful flowers at Christmas and onwards. I am a firm believer in this plan of starting them very gradually in the open air during autumn, and then housing them just previous to frost. For some few weeks when first under cover they will need no fire heat, but it is very essential that they never get checked by cold; therefore some little care and judgment are needed in ventilation and the judicious use of a fire upon cold nights.

As soon as those Roses that were carrying flowering growth when housed have bloomed, they can either be removed to a cool pit or frame and allowed to complete their ripening ready to take the place of our earliest batch, or be retained if more promising growth is being made. It is easy to work two batches in this way, and as we can place the ripened and pruned plants close together, there is ample room for several to finish the crop of bloom that would have been lost outside. As this is secured, and the plants removed to the pit or frame, we shall have the desired space for our later batch, then fast breaking into growth and needing more room. Cut flowers are equally valuable a week or two before Christmas, as at that time and after, when the first really sharp frost comes, our outdoor flowers are gone all at once, and then a few Roses that have been saved as described are much appreciated. The most important points are to prepare the plants with care, and never to hurry them too much when first housed. The protection of glass and shelter from cold air is a great change, and fire heat should be kept away as long as open weather lasts, or, at any rate, much longer than many practise. R.

FERNS.

NEPHROLEPISES.

Although this genus is chiefly confined to the tropical regions, several of the species may be grown in an intermediate temperature, and during the summer they will thrive well in an ordinary greenhouse provided the atmosphere is not too dry. Few Ferns are so easily managed as the Nephrolepises. They can be readily increased by division, or the young plants which spring up from the slender spreading rhizomes or stolons. Some of the species produce tubers under ground, and from these young plants are produced wherever they can push through and find daylight. Besides the above mode of propagating, most of the species produce spores which germinate freely, the only exception in regard to spore-bearing being N. Duffi, which I believe has never been known to produce the slightest semblance to spores in this country, and I am inclined to doubt if it really belongs to the Nephrolepis genus.

The Nephrolepises like a fairly rich loamy compost. If the loam is heavy and devoid of fibre, some peat may be used, but good rough, fibrous loam, leaf-mould, and a little well-rotted manure will suit them well. Plants grown on from single crowns make the finest specimens. With age the plants get dense and tufted and the fronds too much crowded to develop to their full length; it is therefore advisable to grow on young plants periodically to replace those which have become stunted through age. Young plants will, of course, thrive best in a stove temperature, but when required for decoration they may be gradually hardened off.

The Nephrolepises include some of the most effective of all Ferns for growing in suspended baskets; they are also well adapted for elevated positions in the rock fernery, and as pot plants they are equally useful. Within the last few years some of the hardier sorts have been extensively grown for market, N. exaltata being the one which finds most favour. There is not a large number of species and only a few garden varieties have been added; this is probably owing to the fact that they are generally propagated by division instead of from spores, for I have found that when raised from spores they are inclined to vary in character quite as much as Pterises and others. This is particularly the case with N. davallioides furcans, from which we get a beautiful variety in N. d. multiceps, which differs from its parent in having narrower and more forked pinnæ, the fronds branch out more, and sometimes terminate in a dense tuft of finely-cut multifid growths. Another distinct variety is N. d. plumosa; although this is sometimes named N. exaltata plumosa, it is undoubtedly a seedling from furcans. Another pretty garden variety is N. pluma Bausei, differing from its parent in having the pinnæ irregularly forked and lobed; it is a most beautiful Fern, but being deciduous, it is not so well known as it deserves to be, and has probably often been thrown away as being dead when it had only lost its fronds in a natural way. The best way to keep the plants while dormant is to stand them in the stove and see that the soil is kept sufficiently moist to prevent the crowns shrivelling; they will then start into new growth early in the year and the soft pale green, feather-like fronds form a good contrast to the darker green of other sorts.

I have seen several slight variations in N. exaltata; the one I grow has much longer and more drooping fronds than some I have seen. N. tuberosa, which grows erect, is another useful Fern.

Of larger growing forms, N. davallioides and N. ensifolia are the best; both make very long fronds, and it is only when suspended where they have plenty of room that the fronds can develop to their full beauty. N. rufescens tripinnatifida when well grown is a grand Fern, but this is perhaps the most difficult to manage. It is only when young plants are started early in the year and grown on in the stove without receiving any check that it develops perfect fronds; the older plants rarely make good fronds, and even young plants if they have the slightest check will fail to perfect their growth and will have a distorted appearance. The normal form is also worthy of attention and grows freely, the fronds grow erect and attain to from 3 feet to 4 feet in height in quite small pots. This is sometimes confused with N. Zollingeriana, which is a much dwarfer Fern.

Of smaller forms, N. pectinata and N. philippinensis are both compact-growing species; the latter will do well in a low temperature, but pectinata should be grown in the stove. N. cordata compacta is another desirable variety; the fronds are of medium length, deep green, and stand up well, but are sufficiently recurved to give the plant a graceful appearance; this also makes a more symmetrical plant when grown from a single crown. I do not know the origin of this variety, but the name "cordate" is rather misleading, the pinnæ being more sagittate than cordate. N. Duffi (which I have previously referred to as a distinct Fern) is well worthy of attention. It is of erect growth; the fronds are slightly tasselled and droop over a little at the points. It is not often that it exceeds 18 inches in height, though I have seen it nearly double that height. It is only in a moist stove heat that it succeeds well. Though it does not make the long spreading rhizomes as in other species, it can be readily increased by dividing the dense tufts of crowns. I find this species succeeds best when potted in a lighter compost than that recommended for the more vigorous growing sorts. It is more adapted for pot culture than for baskets.

I may close this note by recommending the use of Ficus repens for covering the baskets. If a few young plants are put round the outside of the basket when it is first filled and pegged to keep them in place, by the time the Nephrolepises are well established the Ficus will form a nice green covering round the baskets.

The Nephrolepises require more water than many Ferns, and when the pots or baskets are well filled with roots, a little liquid manure or fertiliser may be used with advantage.

A. Hemsley.

ORCHARD AND FRUIT GARDEN.

A NEW MELON.

MELON Hero of Isleworth (here illustrated) was the result of crossing an early variety with one noted for rich flavour, its merits being its early fruiting qualities for a green variety, with its heavy crop. I think a good green-fleshed Melon difficult to beat as regards flavour, but it will not keep long. My aim was earliness with flavour combined, as in these days, when so much is expected from glass in a private garden, there is a great gain in growing Melons which mature quickly, as three crops may be had in one season. I admit flavour in new kinds is not always retained, but it is not always the fault of the variety, so much depending upon the culture. Rich soil with food at the wrong time causes loss of flavour. The best way to test the quality of new kinds is to grow them in pots, as then the grower can give the treatment desired. I do not advise very large kinds, as I have never been successful as regards flavour with coarse fruits, the smallest or medium sized Melons being usually the best flavoured. I do not by this remark condemn large fruits, but only give my own opinion. The best Melon I have raised (Beauty of Syon) may be termed a small kind, and some large seedlings I have not grown after the first season. If the time required for the fruits to finish and the number of fruit on the plant be taken into account, there is little gain in large fruits. Of late I have noticed that fewer large fruits are exhibited, the smaller ones nearly always being successful. G. WYTHES.

Plum Denniston's Superb.—I have grown this small sized dessert Plum for a good number of years both in pots and on a south-west wall, and have found it excellent in both cases. The tree crops well and regularly, ripens its fruit here in South Notts about the middle of August in ordinary summers, and hangs for some time without decaying. In fact, if left till slight shrivelling of the skin takes place, it forms a most delicious sweetmeat, and is surpassed by none for tarts and preserves. Denniston's Superb makes short-jointed, fruitful wood even in quite a young state, which cannot be said of many of even the best Plums. The fruit is oblong in shape, of a dingy yellow colour, thickly suffused with purple freckles when quite ripe.—J. C.

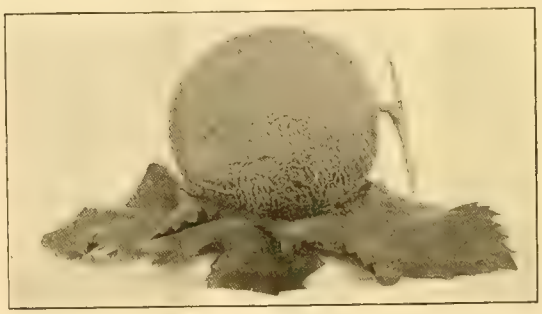
Plum Early Favourite.—At page 127 "G. W." notices this fine Plum. I quite agree with his remarks, having seen the Plum growing and fruiting well on an east wall in this neighbourhood. It is both an early and heavy cropper, and makes delicious pies and preserves. Anyone contemplating planting early Plums on a wall ought certainly to include one or two trees of Early Favourite. The old Orleans is still one of the very best of this type, rarely missing a crop, and while generally classed as a cooking Plum, is not to be despised for dessert. Where ripened on a south or west wall Orleans is a good market Plum, but it should not be planted on strong retentive soil, or gumming and premature decay are liable to follow. It would not be wise to plant it in standard form except in southern counties. —J. C., *Notts.*

Pear Beurre Giffard.—When writing of Jargonelle Pear last week I intended adding a word of praise for that most useful and good flavoured early Pear Beurré Giffard, at present, I think, but little known. In the garden under my charge it ripens simultaneously with Jargonelle, and although not perhaps quite equal to that sterling old sort is well worth growing both as regards flavour and productiveness. The fruit is of medium size, tapering towards the stalk, the colour when ripe being a mixture of yellow and bronzy red. It is juicy and refreshing, and although, like most of the early Pears, it requires to be eaten soon after being gathered, it does not decay in the centre so soon as that well-known Pear Citron des Carmes.—J. C.

Apple Lord Suffield.—Where this Apple does well, no more satisfactory one, from the housewife's point of view, can be grown. On comparatively light ground on a chalk subsoil in Dorsetshire I found it flourishing grandly. Bush trees on the English Paradise stock, sixteen years from the graft, were 10 feet high and almost as much through. They looked the picture of health and were carrying a fine crop of large, smooth, clear-skinned fruit, averaging half a pound a-piece. Curiously enough, although Lord Suffield showed no signs of canker, which is so prevalent in this variety in some soils, three trees of Lord Derby in the same garden had been attacked by this disease. Standard trees of Devonshire Quarrenden were laden with a fine crop of brilliant crimson fruit. The situation of the garden was high and exposed, being but a little below an expanse of heather-clad moorland, which commanded an extensive view for many miles around.—S. W. F.

PEACH HOUSE FACING WEST.

MY Peach house is situated against a wall facing the west, and although the trees (which are the best of their kind) are very strong and healthy and flower freely, yet there is a very poor show of fruit. Do you think the house should be removed to a wall facing the south? This is the third year only that I have had the house.—DODO.



Melon Hero of Isleworth. From a photograph sent by Mr. Wythes, Syon House Gardens.

*** A west aspect for a Peach house is not nearly so suitable as would be a wall facing either south, south-west or south-east. During the first four or five years the trees are grown in a house on which the morning sun does not shine, they grow too strongly and fail to ripen their young growths sufficiently to produce fruit in quantity. The trees may flower freely and yet fail to give many fruits, owing probably to the flowers being either malformed or deficient in pollen grains. A bad attack of red spider, strangely enough, was the cause of several trees in a lean-to house facing west commencing to fruit freely, and since experiencing this severe check these trees have never failed to crop heavily. The trees being young and the border new the growth is apt to be extra vigorous, and only the spray or small weakly shoots seem capable of producing fruit under such conditions. Root-pruning is one way out of the difficulty, but even this failed in one instance that came under my notice, owing, it was thought, to the soil returned about the roots not having been made poorer. "Dodo" will do well to have his trees root-pruned, the deep running roots immediately under the stems of the trees being particularly searched for and freely shortened and rather poor loamy soil with old mortar rubbish added, packed firmly about the roots in the place of the old and perhaps richer compost. If this is done about the middle of September or while yet the leaves cling tightly to the trees, the old ball of soil and roots given a good soaking of water and overhead syringing be resorted to, there will be little or no flagging and fresh root fibres will be formed before the leaves fall. Should the root-pruning have the effect of causing one or more trees to flag badly, then the house should be kept closer, the trees be shaded from bright sunshine, and be very frequently syringed overhead. Under this treatment there should be an improvement in the crops next season. A free use of fire-heat to a certain extent compensates for the loss of sunshine, and with the wood only moderately strong and thoroughly well matured it is just possible heavy cropping would commence without interfering with the roots. Many growers, however, have so much faith in the beneficial effects of partially or wholly lifting Peach and Nectarine trees, that they resort to the practice either annually or biennially. Early next month "Dodo" could, if so disposed, have his house shifted to a south wall and the trees be moved into it again before the ends are closed in, dragging them through narrow doorways not answering well. They ought to be carefully lifted and moved soon after the wood is firm and the buds plumped up, not waiting for the leaves to fall. If the work is properly done, a crop of fruit, though not a heavy one, should be taken from them next season. All things considered, the latter alternative would be the most certain to give the greatest satisfaction in the long run.—W. I.

Currants at exhibitions.—There are few fruits more difficult to judge accurately than are Currants. Whites are in small variety, and a good clean sample of the White Transparent will usually take first place if only one lot be staged. It is when there are several dishes of the same variety or, in Reds, good clean samples of Red Cherry or La Fertile, or La Versaillaise, as sometimes called, that it is so very difficult to determine which is best. Then cleanness or brightness helps to solve the problem, everything else being equal. When ordinary Red Dutch is shown with the Cherry, then the former invariably has to take a back place. Some smart exhibitors go over their bunches carefully and cut out the smaller or imperfect berries, thus materially improving the average sample, and if also they run them carefully through a cloth the effect is remarkable. Currants naturally have such bright glossy skins and a certain degree of transparency, that few fruits look nicer when thus touched up. In relation to Black Currants some difference of opinion evidently prevails as to whether these should be shown in bunches or as single berries. When bunches are shown there is always great disparity in size between the upper and earliest berries and the end berries. It is commonly the case also that the large first berries are ripe fully a fortnight before the rest of the berries are. That being so, when bunches are left hanging late to finish out the first berries often drop. Now there can be no question but that it is wiser and more economical to encourage gathering of the large berries first, as by so doing there is not only less waste, but the smaller berries finish up better. For that reason some favour the showing of Black Currants in berry form and not in bunch form. For the reasons given, that is my preference also. It would be interesting to learn whether that opinion is generally held, as it is well to have equal practice at shows.—A. D.

Rubus laciniatus.—Planted out on the margin of a broad path in the kitchen garden at Maiden Erleigh, Reading, this excellent Bramble was the other day fruiting abundantly. No effort is made to cultivate it, as that tends too much to coarse growth, that is difficult to ripen. Summer growths of medium character that harden well in the autumn and winter carry good quantities of fruit the following season. These growths are, however, rigidly thinned. The fruit was not only very fine, but very sweet and soft, indeed delicious for the dessert. Perhaps it is because

culture tends to the production of coarse growths that complaint is sometimes made, as recently, as to deficiency of flavour in Raspberries. Very strong growths may bring the largest fruit, but it is not always the sweetest or most highly flavoured.—A. D.

Stove and Greenhouse.

ACHIMENES CULTURE.

Considering the attractive character of the Achimenes, it is strange it should have fallen into disrepute. A well-flowered batch of Achimenes well repays any pains and labour that may have been bestowed upon them. Formerly a class was provided for them not only at the London exhibitions, but also at local shows during May and June, and I can well remember the fine plants shown at South Kensington by Mr. Bones, of Havering Park, Romford, these being at least 3 feet across. One most important point in their management is keeping the corms in a plump condition during the winter. When the pots are laid on their sides in a very dry place, the soil sometimes becomes so hard that the corms partially shrivel and lose their vitality, starting irregularly and weakly in the spring. The best way is to fill shallow boxes with silver sand and embed the corms in it, keeping them in a dry, but cool place. The time of starting must of course be regulated by the date at which the plants are wanted to flower. If in May they must be placed in heat in January; if in June, February and so on, March pottings securing a batch in July. Some growers put the corms into the pots or pans in which they are to flower at first, planting rather thickly and thinning out when an inch high. Others prefer to sow in boxes or pans and to transplant when an inch high, and doubtless both ways have their advantages. Whether pots or pans are employed, good drainage is needed, as anything approaching stagnation at the roots is fatal to Achimenes, and they, moreover, take copious supplies of water when well established. Some growers pass the soil through a rather fine sieve, but this I do not approve of, as Achimenes enjoy an open porous root run, such being likewise less liable to become compressed and sour. I prefer soil of a light loamy nature, a fourth part leaf mould, dried cow manure and silver sand being added. Early batches may be grown in an ordinary stove if given a light position and shaded from the full glare of the sun, but I have found an intermediate heat suit them best, this furnishing a more stocky and branching habit of growth. Achimenes are soon crippled by draught, and for this reason ought not to be subjected to front air till June. Many a healthy lot of plants has been entirely ruined by the sun shining fully on the foliage in March or April while yet wet from the morning's syringing; hence the necessity of a permanent shade. A piece of tiffany or thin canvas tacked over the roof glass is the best preventive. Early closing coupled with plenty of atmospheric moisture is essential to a free and rapid growth, and if wanted for exhibition the young plants must be pinched when 4 inches or 5 inches high. For the latter purpose large shallow pans are most suitable, but for ordinary decorative purposes 6-inch pots will be found to answer best. When rooting freely, weak liquid manure made by steeping a bag of sheep manure in a tub of water may be given with benefit three times weekly, and where show specimens are wanted, training should commence as soon as the shoots are pliable enough, nothing answering better for supports than small Hazel canes. When the bloom shows itself a somewhat cooler temperature is advisable, as flagging and bloom-dropping will follow any sudden removal from a stove to an airy conservatory or exhibition tent. For later batches cooler treatment answers well enough, and the plants may be placed in a north house to retard them if great care is used in watering.

The freest growing and most profuse blooming kinds are Ambroise Verschaffelt, Sir Treherne Thomas, Mauve Queen, longiflora alba, grandiflora and Dazzle. J. C.

Tuberoses for late work.—Where these are grown specially for late or midwinter work, they are best potted at the end of May or early in June. To defer the potting later than this will not only materially affect the number of flowers on any one spike, but I believe it also accelerates blindness. As Tuberoses in midwinter are by no means too plentiful, particularly after the end of November, endeavour should be made to pot the bulbs at the right time. After the potting is completed, the bulbs are best plunged in the open in cocoa fibre or ashes. Here the growth will be very slow from the first. By the middle of August, however, some of the forwardest will be pushing forth spikes, and at this stage they will need slight protection at night. Where the spikes are not as yet appearing the plants will be quite safe for a week or two longer. So far as my experience goes, I have found it best to get the spikes fully 6 inches above the pot by the first week of September, as there is more likelihood of these coming away well. They are also stronger than those spikes which come late in the autumn. The use of small sized pots for these late batches is one of the best aids to the flowering of the Tuberose. Red spider and thrips are very troublesome at times, but if the plants are frequently syringed, these may be in a measure checked. While still in the frames I am rather partial to overhead watering with either soot water or liquid manure. Soot water may also be freely used for syringing till the flowers begin to expand. This and quassia water, with a moist atmosphere, will do much to keep red spider and thrips in check.—E. J.

Ixora Colei.—This, which is said to be a hybrid between I. coccinea and I. stricta alba, stands out conspicuous among the many Ixoras grown in our gardens from the fact that while in nearly the whole of them the blossoms are of different shades of orange and salmon, those of I. Colei are pure white. It is of good habit, well furnished with deep green foliage, while the flowers are freely borne, and as a rule a succession is kept up for some time. As a pretty free-blooming stove shrub this Ixora certainly merits a passing notice.—H. P.

Pot Mignonette.—About the third week in August is a very good time to make a sowing of Mignonette in pots for a supply of bloom during February and March, the second or third week in September being soon enough for a batch to flower in April. I use 6-inch pots, draining thoroughly, employing a compost composed of good friable loam, not sifted, but pulled to pieces with the hands, a little leaf-mould and road grit being added. Some advise manure, but I think this is apt to induce a sappiness in the early stages of growth, which renders the plant liable to die off through damp during November and December. If weak manure water is given in January the seedlings soon strengthen, and patchy plants are then the exception. After filling the pots to the required height the soil is made level with the base of a small pot and the seed sown thinly. Thick sowing should be avoided, as in thinning out the plants where crowded those that are to remain are much loosened, which is an evil. The seed should just be covered with fine soil and the surface again made firm, the pots being then placed in a frame on a hard bed of ashes. It is a good plan to turn the frame towards the north, as then the soil does not get so dry and shading is unnecessary. Tilt up the lights until the young plants appear, after which the frame may be turned round and the lights removed by day, placing them on at night and tilting up. As the plants strengthen, entire exposure both by day and night is best until the approach of frost necessitates the removal of the plants under glass. Repeated rains, however, being injurious, protection must be given in very wet weather. Seven or eight plants are sufficient for each pot; when more are left side growths are poor and the bloom trusses weakly. I usually keep my plants in the frame until the middle of November, then give them a position near the glass in a cool, airy house. Liquid made from either cow or sheep manure suits Mignonette well, giving it three times a week of moderate strength only at the beginning of the new year. In regard to varieties I find none so suitable for pot work as Miles' Spiral. Machet is a good sort, but not in my opinion equal to Miles' Spiral.—J. C.

Panax longissima.—This is a New Zealand tree of peculiarly striking habit and one of the most effective of cool greenhouse fine-foliaged plants. It is not, however, very plentiful even in its native country, and is consequently not often seen in our conservatories. In the temperate house at Kew there are several specimens whose handsome leaves contrast well with the ordinary types of foliage amongst which they are growing. The largest plant is about 12 feet high and has three erect stems, the surface of these stems being remarkably ridged and corrugated. The stiff, sword-shaped leaves, from 1½ feet to 3 feet long, but scarcely more than 1 inch wide, are of a very dark green, relieved by the yellow midrib, the margins being very sparsely toothed. The leaves are perfectly rigid and point downwards, so that the points stand away only a few inches from the erect stem. The plants are of extremely slow growth. Panax is nearly allied to Aralia and the plants do not flower until of large size. Several of the species change the character of their foliage as they reach the adult state, the simple leaves, of somewhat the same character as those described above, being replaced by others of more or less digitate or palmate shape.

Erythrina Humei.—At this season of the year especially the brilliant scarlet flowers of this Erythrina are very acceptable in the cool house. This year it is flowering exceptionally well, the bright sunshine of the early part of the summer having evidently suited it, as might indeed be expected in the case of a native of South Africa. Like all the Erythrinas, the leaves of this are trifoliate, the leaflets being of rhomboid outline with spiny petioles. The flowers are densely clustered at the upper third of a tall raceme, which stands clear above the foliage from 12 inches to 18 inches. The habit of the plant does not conform to that type, which is commonly known as good, for it has a bare rugged stem and the leaves are confined to the ends of the branches. It is useful, however, for associating with other plants of more bushy spreading growth. An older name for it is E. caffra, under which it was figured many years ago in the *Botanical Magazine*, t. 2431.

SPECIES OF ÆSCHYNANTHUS.

During the latter part of the summer and often well on into the autumn the bright blossoms of several species of Æschynanthus form a very prominent feature in the stove, yet, though they readily lend themselves to different modes of culture, their merits are frequently not sufficiently recognised. There are several species in cultivation, and in some cases they are a good deal alike in general features; hence where space is limited two or three distinct forms are all that are needed. In selecting three I should be inclined to name two old forms, viz., Æ. grandiflorus and Æ. Lobbianus, and the charming little Æ. Hildebrandi, which has for a couple of seasons at least formed such a brilliant feature at Kew, where it flowers much earlier in the year than the other kinds. Of these Æ. grandiflorus is more compact in growth than several of the others, and forms quite a bushy plant from 18 inches to 2 feet in height, clothed with oblong lanceolate leaves 3 inches or nearly so in length and of a deep green tint. The blossoms, which are borne in large clusters on the point of every shoot, are peculiarly curved and of a bright orange-scarlet colour. Æ. Lobbianus is far more of a trailer than this last, and the long slender branches are clothed in a regula manner with small deep green leaves, while th

flowers, which spring from a dark purple cup-shaped calyx, are of a rich bright red, quite distinct from the preceding. Æ. Hildebrandi, when but 3 inches or 4 inches high, flowers so freely that its brilliant orange-scarlet coloured blossoms form quite a compact mass. I have not seen this charming species other than at Kew, and it does not occur in any nurseryman's catalogue that I have perused.

The culture of the various species of Æschynanthus is not at all difficult, and they readily adapt themselves to various modes of treatment. In the first place they may be grown in pots in the orthodox manner if the pots are well drained and the soil used is principally fibrous peat, with a good sprinkling of sharp sand and some live Sphagnum mixed with it. Next they may be grown in suspended baskets, and this is perhaps the best way to show their beauty. Æ. Lobbianus is particularly adapted for this mode of cultivation, as the long pendulous shoots, clothed in a very regular manner with their dark green leaves, form a very pleasing object at all seasons, and from August onwards for two or three months its beauty is greatly enhanced by the clusters of brightly coloured blossoms. A third method, by means of which very effective specimens can be obtained, is to take a piece of dead Tree Fern stem and set it in the centre of a pot, the Æschynanthus being planted in the soil with which the base of the Fern stem is surrounded to keep it in position. Now, if the shoots as they grow are secured to the stem by a few pegs and a little live Sphagnum Moss to maintain a certain degree of moisture, they quickly attach themselves to the stem by roots produced from various parts of the branches, with the result that in time they form a dense mass, and grown in this way they are when in flower very effective. All the species will succeed with liberal supplies of water during the growing season, but at the same time it should be borne in mind that they are naturally epiphytes, hence ample drainage must in every case be ensured, as the roots, which are not particularly numerous, are very impatient of stagnant moisture. H. P.

Pleroma macranthum floribundum.—The typical form of Pleroma macranthum was introduced in the early sixties, and for the last twenty years has been a fairly well-known plant. For flowering in a rather warm greenhouse (what is known as intermediate) there is no plant that makes a more effective display during the latter half of the year. Even in a cool greenhouse or winter garden it thrives well enough to be always worth a place, although the flowers are not so large, neither is the foliage so vigorous and handsome as when treated to a little more heat. The leaves are from 4 inches to 6 inches long, ovate in outline, the surface rugose and downy, and traversed by the three prominent veins running lengthwise, that are so constant a feature in the Melastomads. In this note I desire more particularly to draw attention to the variety known as floribundum. The flowers of the ordinary P. macranthum are each 3 inches to 4 inches across, but in the variety just mentioned they are, as a rule, close upon 6 inches in diameter, and occasionally 7 inches. This enormous width of flower is accompanied by such breadth and substance in the petals that there is no space between them, and they give to the flower a fulness which, combined with the brilliant blue-purple colour, makes the individual blossom the showiest perhaps of all stove and greenhouse plants.—B.

Dianella aspera.—The Dianellas are a group of greenhouse plants noted for the beauty of their fruits belonging to the Lily family, and natives of New Zealand, Tasmania, and Australia. Several of them are of extremely graceful habit, having slender stems and long arching leaves, providing a type of foliage which might well be more abundantly represented in our conservatories and winter gardens than is now the rule. D. aspera is a species of a somewhat stiffer habit than most of the others, but, considered from the point of beauty in the fruit, is the handsomest of all. The fruit, about the size of a large pea, is produced abundantly in panicles 1 foot or more long, and ripens during the month of August and becomes a beautiful bright blue. A plant in the temperate house at Kew about 4 feet high is now well furnished with panicles of fruit. The flowers of this and other Dianellas are also very pretty, being of small size, but borne numerously on light graceful panicles, and varying from white to light and deep shades of blue. D. cærulea, tasmanica, and lævis are all well worth cultivation, and although rare, are still to be found in some gardens.

HYMENOCALLIS (ISMENE) AMANCAES.

Hymenocallis Amancaes, the so-called Peruvian Daffodil, the celebrated Amancaes of the Peruvians, in honour of which the natives yearly hold a kind of religious ceremony, was first brought into cultivation as long ago as 1804. There exists a figure of it in the "Flora Peruviana" of Ruiz and Pavon, together with a cut



Hymenocallis (Ismene) Amancaes. Engraved for The Garden *from a photograph sent by C. G. Van Tubergen, Jun.*

of Elisena longipetala (see note in The Garden, August 1, 1891). We find stated that at the time of its introduction it was considered to be a hothouse plant, and was treated accordingly.

Dean Herbert, however, who has done so much to increase our knowledge of bulbous plants, of Amaryllideæ in particular, soon found that after giving the bulbs a period of absolute rest during winter he could induce them to flower out of doors. He therefore planted the bulbs in spring on a very sunny border, or against a wall looking south, where the flowers were produced in June.

The present engraving, which was made from a photograph of a plant grown by me in that way, gives a good idea of the flowers. These, numbering from four to seven, or even more, according to the size of the bulbs, are borne on a stout stem nearly 1 foot in height. They are of the deepest yellow, and have both inside and outside six bright green broad bands running down the widely-expanded, Daffodil-like cup. The blossoms exhale a very strong, powerful fragrance, noticeable at a fair distance. When cut off and put into water, they remain fresh nearly a week. C. G. van Tubergen, Jun.

Haarlem, Holland.

Rhododendron retusum.—This is one of the few species that have been introduced from the region of the Malay Archipelago, a section of the genus, which, in spite of its small numbers, has, in the hands of the hybridiser, given birth to the fine race of greenhouse Rhododendrons, now so well known by the exhibits of Messrs. Veitch. R. retusum is not one of the finest of the Malayan group, but it is a rare plant, and it is interesting to see it flowering in the large temperate house at Kew. The specific name refers to the shape of the leaf, which is 1½ inches to 2½ inches long, obovate, and retuse (or even emarginate) at the apex. It is also of a dark glossy green, paler and minutely dotted beneath. The flowers, in clusters of half a dozen or more, are pendulous. The corolla is 1 inch to 1½ inches long, bright red, tubular, with five slightly spreading rounded lobes. The species is a native of the mountains of Java, and was introduced in 1853.

SHORT NOTES.—STOVE & GREENHOUSE.

Ivy-leaf Pelargonium Ryecroft Surprise is in its way a very fine variety. It produces large bold trusses of dark salmon-pink flowers the whole summer. The habit of the plant is dwarf and branching, unlike most of the sorts; this renders it valuable for pot culture.—H.

Lilium Krætzeri.—When the value of this fine white Lily for pot work is better known, it will, I am sure, be more often grown. For producing large plants, by placing five or six bulbs in a 12-inch pot, it is unsurpassed, growth being both tall and branching. For placing in the windows of front halls, or for mixing with groups for indoor decoration, it is invaluable, and all who need autumn flowering Lilies for such purposes should grow it.—J. C.

Societies and Exhibitions.

ROYAL HORTICULTURAL SOCIETY.

August 27.

The meeting on Tuesday was a full and representative one for August, outdoor flowers being the chief feature, especially Gladioli and Asters, which made a solid bank of colour the entire length of the hall. Orchids, though less in number, were represented by some choice new hybrids, whilst Mr. Woodall's grandly flowered plant of Vanda cœrulea was a centre of attraction. Fruit was largely shown, particularly Apples and Plums.

Orchid Committee.

First class certificates were given to—

Cattleya aurea Mrs. Fred Hardy, which differs from the type in having pure white sepals and petals; lip similar to that of a fine variety of C. Dowiana aurea. From Messrs. F. Sander and Co.

Awards of merit were given to—

Cœlogyne Veitchi, a new species, with small pure white flowers borne on pendulous spikes. It belongs to the same section as C. Dayana and C. Massangeana. From Messrs. J. Veitch and Sons.

Lælio-Cattleya elegans Oweniæ.—An extra fine variety of the Turneri section, with a pure white throat. Unfortunately, the flowers were not fully expanded. From Mr. Statter.

Lælio-Cattleya Charles Darwin.—A hybrid between L.-C. elegans Turneri and Cattleya maxima; sepals and petals crimson-purple, lip deep crimson in front and through the centre to the throat. The sides of the throat are bright orange yellow at the base, the upper part rose, tipped with crimson. From Mr. C. Ingram.

Dendrobium Hookerianum, better known as D. chrysotis, under which name it had previously received a first-class certificate. Sepals and petals bright yellow, lip yellow, heavily fringed in front, with two chocolate-brown discs in the centre. From Sir T. Lawrence.

Mr. T. Statter sent a very fine collection of cut flowers, principally Cattleyas and Lælias. Prominent amongst these were L.-C. elegans var. excellens, L.-C. elegans var. prasiata, L.-C. elegans Chelsoniensis, L.-C. callistoglossa, L.-C. Nysa, two fine varieties of Cattleya Rex, a fine spike of C. Gaskelliana var. alba, two forms of C. guttata, Cypripedium memoria Mœnsi, C. lancifolium and Dendrobium Phalænopsis in variety. A silver Flora medal was awarded. Messrs. J. Veitch and Sons were also awarded a silver Flora medal for a small, but interesting group, consisting of two fine varieties of Cattleya Dowiana aurea, Vanda Sanderiana, two plants of Cattleya Eldorado alba, Cypripedium warnhamense, C. tonsum superbum, some fine varieties of C. Curtisi, C. Charlesworthi (with an immense dorsal sepal), C. œnanthum superbum, C. Chas. Canham and a fine plant of Miltonia vexillaria superba. Messrs. F. Sander and Co. sent a fine group, amongst them being Cattleya Fowleriana (shown at the last meeting), C. aurea Statteriana, Habenaria carnea, Miltonia vexillaria, Burlingtonia pubescens, Oncidium Forbesi, Dendrobium Phalænopsis Schrœderianum in variety, Pleurothallis bracteata, Cypripedium œnanthum superbum, some fine plants of Oncidium Jonesianum and Angræcum Scottianum (silver Banksian medal). Mr. F. Hardy exhibited Lælio-Cattleya elegans Turneri, L.-C. × Hardyana (said to be the reverse cross of L.-C. callistoglossa), and a fine variety of Oncidium Kramerianum. Mr. C. Ingram sent Lælio-Cattleya elegans Turneri elsteadensis, L.-C. e. Ingram's var., and L.-C. Elstead Gem, described in the report of the last meeting. The plant now shown was considered superior to the one shown at the previous meeting, being much brighter in colour.

Sir T. Lawrence sent an exceedingly large-flowered var. of Catasetum Bungerothi, Stauropsis philippinensis, Oncidium Lanceanum, and O. hæmatochilum. Mr. A. H. Smee sent Aeranthes grandifolium and Catasetum species. Mr. De B. Crawshay sent a well-grown plant of Odontoglossum Uro-Skinneri. Mr. E. H. Woodall sent a finely grown plant of Vanda cœrulea with seven spikes of flowers, Cypripedium Morganiæ with three spikes, C. Stonei, and Odontoglossum coronarium. Mr. F. W. Moore, Glasnevin, showed Oncidium St. Legerianum and Bulbophyllum Reinwardti. Messrs. Lewis and Co., Southgate, sent a group, consisting of the rare Cypripedium Evenor (a hybrid raised from C. concolor and C. Argus), C. Charlesworthi, C. radiosum, Miltonia Moreliana, M. spectabilis virginalis, Cypripedium Godefroyæ with a white ground, Dendrobium cruentum, a fine variety of Cattleya Warscewiczi, Habenaria Susannæ, Odontoglossum grande, and Oncidium olivaceum Lawrenceanum. Messrs. Hugh Low and Co. had two fine plants among their small group of the Swan Orchid (Cycnoches chlorochilon), showing the male and female flowers, several fine varieties of Cypripedium Charlesworthi, Dendrobium Phalænopsis, D. speciosissimum, a fine variety of Odontoglossum Harryanum, and Bulbophyllum Huttoni. Messrs. B. S. Williams sent Pachystoma Thompsoni and Odontoglossum Kramerianum.

Floral Committee.

Awards of merit were granted to the following:—

Alocasia Lowi grandis.—This is quite distinct from A. Lowi, having broader leaves of a very deep olive-green colour, with the white leaf veins also much more prominent. It is a beautiful fine-foliaged plant, and was shown by Messrs. Hugh Low and Co.

Robinia neo-mexicana.—A new and beautiful Acacia, which bears abundantly dense clusters of flowers of a rosy pink colour, resembling those of the Rose Acacia, but produced in long succession upon the growing shoots. It will make a large tree, but flowers freely in a young state. From Messrs. Paul and Son.

Kniphofia Pfitzeri.—This is a very fine variety, with large dense heads of great length and extra brilliant in colour. Shown by Mr. M. Prichard, Christchurch, Hants.

Scabiosa caucasica alba.—The pure white form of the Caucasian Scabious is now well known, and is equally as fine a garden flower as its blue parent. This also came from Mr. Prichard.

Gladiolus Kate Rose.—A pretty variety, with large flowers, which are of a French-white colour, slightly feathered with light mauve-purple. Shown by Messrs. Kelway, of Langport.

Gladiolus Dolops.—This bright and handsome kind has a bold spike and large flowers of rich salmon-red colour. From Messrs. Kelway.

Gladiolus Brantford.—A distinct and striking self-coloured variety of a deep dark crimson hue, overlying scarlet, this latter tint more prominent in the throat. Also from Messrs. Kelway.

Dahlia (pompon) Fabio.—This pretty kind has flowers of a rich glowing crimson at the tips of the florets, this colour shading gradually to deep orange at the base. It was shown by Messrs. Charles Turner and Son, Slough.

Dahlia (pompon) Purity.—The flowers of this are pure white, neat and well formed, but apparently no improvement on existing kinds. From Messrs. Turner.

Dahlia (pompon) Nerissia.—A distinct kind with self-coloured flowers of a bright rosy lilac tint. From Messrs. Turner.

Dahlia (pompon) Douglas.—The flowers of this kind are of an intense dark crimson shade, almost black at the tips of the florets. From Messrs. Turner.

Dahlia (Cactus) Beatrice.—This has flowers of true Cactus form and in colour a distinct shade of light mauve-purple. From Messrs. Turner.

Dahlia (Cactus) Leonora.—A large-flowered and handsome kind, rose or magenta-red, shading to mauve at the tips of the long pointed florets. From Messrs. Turner.

Dahlia (show) Dante.—This, one of the big flowered show varieties, has a full solid bloom of a dark maroon-crimson colour. From Messrs. Turner.

Dahlia (show) Mabel Stanton.—A yellow kind of large size, rich in colour and of perfect show form. Also from Messrs. Turner.

Messrs. Kelway, of Langport, made a most noteworthy display of all their best Gladioli, showing about sixteen dozen grand spikes, of which the best, in addition to those previously mentioned, were Marsi, salmon; Helotes, crimson with a white throat; Ollins, deep crimson self; Onabus, rosy cerise; and Gildo, lilac-rose, shading to a lighter tint, with yellow blotch in the throat. A silver-gilt Flora medal was deservedly awarded. Asters from Messrs. J. Veitch and Sons were a large and comprehensive collection of the many strains and types now existing in this fine autumn annual flower. A silver Flora medal was awarded. Messrs. Dobbie and Co. also showed a fine lot of this flower grown at their Orpington seed grounds. The giant white Comet Aster was very beautiful in this group, its flowers as informal and graceful as those of Lady Selborne Chrysanthemum. A silver Banksian medal was granted. Messrs. Barr and Son received a silver Flora medal for a large and characteristic group of the best hardy flowers of the season. Perennial Sunflowers were represented by the best kinds, and Rudbeckia Autumn Glory is a hardy flower all should have, although it is unfortunate that this fine flower should have two specific names and a popular one besides. Tritoma Saundersi, an old, but by no means to be despised variety; Gladiolus Saundersi, a free and pretty species, with early Asters, fine Phloxes, and Tiger Lilies were also noteworthy in this group. Mr. M. Prichard also showed hardy flowers admirably, many choice and lovely things figuring in his group. Lilium tigrinum splendens was shown here very fine indeed, also Kniphofia Macowani, an old, but free-blooming, very hardy variety. K. Phœbus, one of Max Leichtlin's raising, is a distinct Torch Lily, with a thick spike of yellow flowers, and K. Lachesis, from the same raiser, is very pretty, with a crowded spike of orange-yellow flowers that have long exserted anthers. Montbretia rosea, Eupatorium purpureum, Helianthus Miss Mellish, Lobelia fulgens Robert Parker, Hemerocallis Middendorfiana, and Trollius Orange Globe were all noteworthy in this group, which received a silver Banksian medal.

A varied group of hardy flowers and flowering trees and shrubs shown by Messrs. Paul and Son was awarded a silver Flora medal. Phloxes were fine here, notably the varieties Eclatante, Auguste Riviere, Purity, Etna, and Iris. Lobelia syphilitica robusta, with long spikes of clear blue flowers, was handsome. Helianthus rigidus Miss Mellish was represented by a noble bunch of large flowers. The perpetual-flowering Acacia was shown, and the new rosy-flowered Mexican variety, also many wild Roses in fruit, and Crassula rubicunda, a bright-coloured, succulent plant with red-tipped leaves and crimson flowers, a striking plant as shown, filling a large pan. Mr. Cannell showed a quantity of the old Cockscomb in many shades of colour, but none of them striking enough to increase interest in this floral monstrosity, whilst the great ugly double Sunflower shown in this group we hope will not often be seen in gardens. Some very good double Begonias were included in this group, the plants dwarf and carrying their flowers erect, and Cannas were very fine, the plants having one stem only and in small pots, but bearing large clusters of flowers. A silver Flora medal was awarded, and a similar award went to Mr. J. F. McLeod, gardener to Mr. Morgan, Dover House, Roehampton, for a representative group of Crotons, which comprised all the finest varieties in well-grown, highly-coloured plants of a useful decorative size. A group of Lilium auratum platyphyllum and L. a. rubro-vittatum with Dahlias from Mr. T. S. Ware received a bronze Flora medal, and Mr. J. Ouvrard, Child's Hill, Kilburn, was awarded a bronze Banksian medal for a group of Phrynium variegatum and Maranta major, the latter a new form and a useful decorative stove plant, with

broad, short, deep green leaves borne on erect stems about 2 feet high. A charming lot of Saxifraga sarmentosa tricolor was sent from the society's garden at Chiswick, and seedling Gladioli came from Mr. Thomson, of Cardiff. Hybrid Fuchsias were shown by Mr. P. Fry, West Malling, and two enormous Pampas Grass plumes came from Messrs. Osman, but they looked as though they had derived some of their size from clever manipulation.

Fruit Committee.

Awards of merit were given to the following :—

Apple Williams' Favourite.—This is said to be a good dessert kind. The fruits are large, conical, with an eye of medium depth and a shallow cavity at the base, with an unusually thick footstalk. The colour is very attractive, being deep red all over. It was shown by Mr. G. Bunyard.

Apple (Crab) John Downie.—One of the ornamental Crabs that have been often praised in these pages. Long branches were shown laden with conical Plum-like fruits of a bright red and yellow colour. This also came from Mr. Bunyard.

Apple (Crab) Transcendant.—Another free-fruiting, distinct and showy kind to plant for ornament. Its fruits are larger than those of John Downie, but quite as freely produced and equally brilliant in colour. It was shown by Messrs. J. Veitch and Sons.

Messrs. Veitch and Sons showed an excellent collection of Apples (thirty dishes), Pears (ten dishes), Plums (forty dishes) and Peaches (seven dishes) grown at the Southfields and Langley nurseries. The best Apples were Lord Suffield, Potts' Seedling, Nonsuch, Lord Grosvenor, Warner's King, Stirling Castle, Grenadier, New Hawthornden, Duchess of Oldenburg, Duchess Favourite, Worcester Pearmain and Lady Sudeley. The best Pears were Fondante de Cuerne, Triomphe de Vienne, Colmar d'Eté, Clapp's Favourite, Bacon and Williams' Bon Chrétien. Among the Plums, Cox's Emperor, Transparent Gage, Monarch, Royal Hâtive, Jefferson, Archduke, Yellow Magnum Bonum, Pond's Seedling, Dymond, Lawson's Golden Gage and Standard of England were the best. The best Peaches from trees in pots were Comtesse de Montigo, Barrington, Conkling, Violette Hâtive, and Dymond. They also sent branches of Siberian, Transcendant and Transparent Crabs, Superlative Raspberry and Blackberries (silver-gilt Knightian medal). From the Royal Gardens, Frogmore, Mr. Owen Thomas sent thirty-eight dishes of Plums, Belle de Septembre, Victoria, Washington, Archduke, Transparent Gage, Sultan, Coe's Golden Drop, Pond's Seedling, Kirke's and Standard of England being the best (silver Knightian medal). Messrs. Spooner and Sons, Hounslow, staged a fine collection of Apples (forty-five dishes) and seven dishes of Plums, the best Apples being Pott's Seedling, New Hawthornden, Grenadier, Lord Grosvenor, Schoolmaster, Stirling Castle, Ecklinville, Worcester Pearmain, Bismarck and Frogmore Prolific. The best Plums were Sultan, Victoria, Black Diamond, Pond's Seedling, and Monarch (silver Banksian medal). Seedling Melons came from Mr. Wythes, Syon Gardens; Mr. R. Doe, gardener to Earl Derby, Knowsley, Prescot; Mr. John Miller, gardener to Lord Foley, Ruxley Lodge; and Mr. W. Batchelor, Harefield Road, Harefield, but no awards were given. Mr. T. W. Eames, Twickenham, and Mr. Owen Thomas, Frogmore, sent new Cucumbers. Mr. Hooking, Almondsbury, sent Hooking's Prolific Kidney Bean. Mr. R. Davis, Edmonscote House, Castle Hill, sent a Tomato named Edmonscote Favourite. From Mr. W. Potten, Camden Nurseries, came a box of Malus baccata. Mr. J. Garland, Killerton, Exeter, sent a seedling Peach. Messrs. Cannell and Sons, Swanley, sent two dishes of Tomato The King, and Mr. W. Rapley exhibited a good dish of Sutton's Perfection Tomato grown outside. Mr. A. Bishop, Westley Hall, Bury St. Edmunds, sent a seedling Nectarine. Mr. John Miller, Ruxley Lodge, exhibited a small collection of fruit, including good Brown Turkey Figs and Hemskirk Apricots. From Mr. G. Wythes, Syon Gardens, came a new dwarf Bean, named Syon House Prolific, the pods very large and freely produced.

The fruit committee met at Chiswick on August 16 to examine the Tomatoes grown in pots, also Runner Beans, Cabbages, and other crops. Of Tomatoes very few new kinds showing special merit were noted. The following had previous awards confirmed: Comet, good-sized, smooth, scarlet fruit; Tennis Ball, small, round, scarlet, good for dessert; Sutton's Dessert, scarlet, very free and good; Golden Princess, deep, round, handsome rich yellow fruits. Three marks were awarded to Sutton's Early July, of medium size and very early; also Cherry, a small Cherry-shaped fruit of rich flavour. The following Runner Beans had three marks awarded: Sutton's Prize-winner, a superior long-podded form; Sutton's A 1, also a fine variety; Leviathan, a first-rate cropper; and Capp's White, very prolific, the best of that section. Of smooth-podded varieties, the only forms worthy of notice were Sutton's Tender and True and Veitch's Climbing French Beans, which were considered by the committee to be identical. The best dwarf stocks of Cabbage were those of the Improved Nonpareil sent by Messrs. Veitch and Sons and Nutting and Sons; the best second earlies, Earliest (Sutton and Sons), Best of All (Barr and Son), Express and Etampes (Vilmorin et Cie). All of these were considered to be of the same stock.

The lecture on Crotons and Dracænas was, in the absence of Mr. Bause, read by Mr. G. Bunyard.

NATIONAL CO-OPERATIVE FLOWER SHOW.

August 23, 24.

The tenth annual show of the National Co-operative Society was held as usual at the Crystal Palace, and, having regard to its annual increase in extent, this place has become absolutely essential in order to furnish room for such a mass of exhibits. The entries were in excess of those on any previous occasion, although the extent of the show appeared smaller. This, however, was owing to one half of the central transept being occupied with some permanent exhibits that form part of this season's attractions at the Palace, and consequently the flower show exhibits were unavoidably crowded together. The exhibition is divided into two sections and several sub-divisions, embracing sectional areas of the country, a wise proceeding that enables exhibitors to compete under something approaching equal conditions. The cut-flower classes and those for plants in pots showed a very marked increase on previous years, as there were over 1200 entries of cut flowers and more than 500 of plants in pots besides some table decorations, altogether making the flower classes numerically nearly as strong as those for vegetables, of which there were 1823 entries. Those who have watched the progress of this annual fixture must have marked the gradual advance, not merely in point of numbers, but in the high quality of the cottagers' exhibits, a great number of which will bear favourable comparison with the productions of experienced gardeners.

Vegetables.

These, it is almost needless to say, are the leading feature in the first section of the show, that embraces cottagers and allotment-holders mainly, and the collections make a prominent display, the country being divided into seven sections of adjacent counties in the respective districts, whilst collections were forthcoming from each. The southern division of England is sub-divided into two areas, and the prize collections from Mr. G. North, of Banbury, and Mr. W. Byles, of Wilton, were exceedingly good. Mr. Maylott, of Hereford, in the western division, and Mr. Luff, Bromley, from the metropolitan district, also showed well, whilst fair collections that secured first honours in their classes came from Loughborough and Sawley. The single classes for various vegetables brought out some very keen competition, the Runner Beans being most noteworthy. French Beans were equally well shown. There were over sixty entries in the class for Carrots. Beetroot, both long and Turnip-rooted, was a large class, but the very common error of sowing too soon was manifest here, and many of the samples shown were much too large and coarse. The Potato classes were well filled and some excellent tubers shown, although here and there a tendency towards coarseness was apparent. Leeks, Onions, Parsnips, Cabbages, Cucumbers, and Turnips were all largely shown. In the section for gentlemen's gardeners many fine exhibits were forthcoming, Mr. Wright, of Glewston Court Gardens, securing first prize for an admirable and well-staged collection of vegetables. In another class Mr. C. J. Waite secured premier honours. Here, again, the Oxford growers were very prominent. Honours were about equally divided in the Potato classes between Messrs. Waite, Holton, Hawkins (who also comes from Oxford) and Chamberlain.

Fruit.

A very fair lot of fruit was shown in the gardeners' and amateurs' section, where Mr. Nowell, of Hereford, was very successful. He was first for a collection of fruit, showing very fine Black Hamburgh and Mrs. Pearson Grapes, Barrington Peaches, Souvenir du Congres Pears and Brown Turkey Figs. The same exhibitor was first for a collection of open air fruit. Cooking and dessert Apples were largely shown, there being about sixty dishes in each class, but the Kent growers held their own here, securing the chief prizes.

Flowers.

These hitherto have been chiefly shown by those who reside in the metropolitan district, but we noted with satisfaction many excellent flower exhibits from cottagers in the provinces. Pot plants alone would have made a large display, only they had to be crowded down the centre of the already overloaded tables. There were many really good examples showing what amateurs can accomplish, and in addition to the conventional sorts of pot flowers, such as Fuchsias and Geraniums, Begonias and Petunias, many annuals in pots, such as Asters, Phlox Drummondi, Lobelias, Tropæolums, and Balsams, well grown and flowered, were shown. The cut flowers in the cottagers' classes were chiefly annuals, but fresh and fine. The stand of a dozen African Marigolds with which Mr. Ward, of Horsham, secured first prize in a strong class was a really excellent one. Zinnias, Mignonette, and Everlasting Flowers were all largely shown, also Dahlias of great merit, whilst the basket and stand of Roses from Mr. Green, of Oxford, must not be omitted, as good blooms of several Tea Roses were present. Flowers were also a prominent feature in the gardeners' and amateurs' section, including pot plants and cut flowers. Annuals in great variety predominated here. Dahlias were abundant, Mr. Hudson, of Gunnersbury, showing, not for competition, single and double Cactus-flowered kinds in quantity, and a class for hardy flowers in bunches brought out some admirable exhibits, Mr. Waite obtaining the first place. Floral arrangements showed a little advance in the desired direction of lightness and grace, but the plan of packing the flowers together into a very solid bunch was still largely manifest.

National Chrysanthemum Society.—A meeting of the general committee was held at Anderton's Hotel on Monday last, when Mr. Wynne occupied the chair. The secretary announced that the annual outing of the members was held on July 23, upon which occasion the testimonial—consisting of a silver inkstand and an illuminated address—was presented to Mr. R. Ballantine on the occasion of his retirement as chairman of the general committee. Upon the motion of Mr. Williams, it was resolved that the committee place on record an expression of sorrow

at the death of Mr. Arthur Wortley, one of the oldest members of the society and formerly secretary of the old Stoke Newington Chrysanthemum Society as far back as 1851. In consequence of the resignation of Mr. W. E. Boyce and Mr. J. Newton from the general committee, Mr. George Walker and Mr. Wm. Holmes were elected to fill the vacancies. Some time was devoted to the consideration of details relating to the society's jubilee next year, and a special committee was elected to give practical effect to the questions discussed. The members forming the committee are Messrs. R. Ballantine, J. W. Moorman, Witty, Taylor, W. H. Lees, E. Beckett, Bevan, Geo. Gordon, Waterer, H. J. Jones, Geo. Stevens and D. B. Crane, with the officers of the society. Twenty-three new members and two Fellows were elected.

MR. A. F. BARRON.

To the Editor of The Garden.

Sir,—Having read the comments which have recently appeared in the horticultural press on Mr. Barron, the superintendent of the Royal Horticultural Society's garden at Chiswick, to-day I visited and criticised the work which was being carried on in the experimental gardens of the society. I was much struck with the great improvement in the condition of the garden and in the cultivation of the plants, the success of which is due to Mr. Barron. A few years ago when I was on the council with Mr. Veitch, just after the society's fortunate expulsion from South Kensington, and when we all hoped that its pernicious influences had been buried for ever, the council were compelled, from lack of funds, to starve the garden, the houses were dilapidated and the place was very much under-manned. To-day I found the houses for the most part in good working order, although two or three would be better if replaced by more modern structures. The collections of Apple and Pear trees I have never seen in better condition, and they contrast favourably with my own. I saw no evidence of blight. Of course, in such a large collection there always must be some trees which are out of health and which require to be renewed. The collection of Figs looked well. I know of no place where such a collection can be found. Those interested in Grape cultivation should make a study of the collection. The hardy annuals and herbaceous plants looked grand, and so did the plots allotted to the seed trials. I cannot conceive the reason why the council should have called upon Mr. Barron to resign. He is a man who is known to every horticulturist whose opinion is worth having to be straight and reliable—qualities absolutely necessary to give confidence to the trader and amateur. If it is true that the Chiswick garden and the fruit and vegetable committees (who visit many times in the year the garden and who are responsible for its management) have not been consulted by the council on this matter, and that outsiders have been called in to report, the council have passed such a vote of censure upon the members of these committees, that no man with a spark of self-respect could continue to serve upon them, and it is for them to resign in a body. If, however, it means a new departure in the management of the gardens, the Fellows should have been consulted and made acquainted with the proposed new scheme. If it is intended to attempt to make the gardens a profitable undertaking—a sort of bastard market garden—the market gardeners would very soon knock the bottom out of such a competitor. If, however, it is intended to convert the gardens into a third-rate nursery for the sale of cheap plants, the nurserymen can tell the Fellows that such a scheme must result in failure and bankruptcy. But should the council desire to make the gardens into a public resort for nursemaids, the sooner the society gives up these gardens the better, for to apply the subscriptions of the Fellows to such a purpose would be little better than obtaining money by false pretences. It is my intention as an owner of an experimental garden, and who for over twenty-five years has had some slight acquaintance with the work which can be successfully carried on in such a garden, and as one who loves horticulture for horticulture's sake, to, at the first opportunity I have, ask for definite information as to the council's remarkable and unintelligible action. Should the answers which I receive not be satisfactory, I shall feel it my duty to submit such resolutions to the consideration of my brother-gardeners as the answers may seem to necessitate. I feel that for the society to lose the services of Mr. Barron (who has still many years of useful work left in him) would be nothing less than a disgraceful job, and prejudicial to the advancement of horticulture in this country. A. H. Smee.

The Grange, Carshalton, August 26.

Proposed testimonial to Mr. A. F. Barron.—A representative meeting of gardeners was held at the Hotel Windsor, Victoria St., S.W., on Tuesday afternoon, Dr. Maxwell T. Masters, F.R.S., presiding, to promote a public testimonial to Mr. Barron as a means of expressing in a tangible form the warm sympathy that is universally felt for him under the unfortunate circumstances of his leaving Chiswick, and in recognition of the long and honourable services which he has rendered to the Royal Horticultural Society as superintendent of its gardens and exhibitions, and to horticulture generally. It was unanimously resolved that a testimonial fund should be raised, and a general committee was appointed, with power to add to their number, Mr. William Marshall, Auchinraith, Bexley, Kent, and Mr. B. Wynne, 1, Dane's Inn, Strand, W.C., jointly undertaking the secretarial duties. It is proposed to elect a president and treasurer at the next meeting on September 10, and in the meantime the secretaries will be glad to receive the names of gentlemen willing to join the committee or to otherwise aid the movement.

NOTES OF THE WEEK.

Calceolaria alba is a most distinct kind with linear leaves, each 3 inches or 4 inches long. The flowers are pure white and freely produced.—T. Smith.

Polygonum cilinode, now in flower here, is a very charming slender climbing species; leaves reddish, flowers white, produced in the freest manner.—T. Smith, *Newry.*

Liatris pycnostachya.—This is an excellent plant in groups where it does well and is effective as an autumnal flower. It comes to us from Mr. A. Perry's hardy plant nurseries at Winchmore Hill, a nursery to which we wish all success.

Parnassia californica has the largest flowers of all the kinds known to me. They are each about 2 inches wide, pale yellow in colour, and produced on stems about 1 foot high. It runs at the root, and even in this respect is quite distinct.—T. S.

Pinks.—Mr. Ladhams, Shirley, Southampton, charms us with the unusual sight of very fine blooms of perpetual-flowering Pinks at this time of the year. Mr. Ladhams says that the plants are as full of bloom and buds as in the spring.

Giant Asphodel at Preston Hall, Dalkeith.—I am sending herewith two photographs of Eremurus himalaicus, which may interest you. It flowered at the end of May and I took the photographs about May 31. The height was 5 feet 10 inches and the flower-head about 2 feet 6 inches. I had my own photographs enlarged, but, as you will see, they are not nearly so sharp as the small ones, which I also enclose.—Henry Callander.

Double Primroses.—The copious rains after the drought seem to have started these into flower, and Mr. Perry sends us from the Hardy Plant Nursery, Winchmore Hill, a nice bunch of almost every variety of doubles—yellow, crimson, lilac—in fresh and excellent condition.

Althæa ficifolia.—This pretty Mallow, of which a coloured plate was given in The Garden for January 12 of this year, is again flowering in the herbaceous grounds at Kew. Although long known and supposed to have been in cultivation about 300 years, it is a rare plant in gardens, but merits popularity for its stately habit, distinct leafage, and lovely blossoms. It may be briefly described as a single Hollyhock with clear soft yellow flowers and leaves like those of the Fig.

Eupatorium purpureum.—A bunch of this was shown on Tuesday, and at Kew lately we noticed a striking group of it quite 8 feet in height. It is one of those vigorous, coarse-growing perennials that might be used with fine effect in certain places. It is always attractive in growth, as it has deep chocolate-coloured stems, contrasting in colour with the large broad leaves, whilst at the present time its tall shoots are crowned with great branched heads of dark reddish purple flowers.

Montbretia rosea.—A large bunch of this was prominent in Mr. Prichard's group of hardy flowers at the Drill Hall on Tuesday, and it is such a distinct form as to merit a special note. Its flowers, about the same size as those of other Montbretias, are freely produced on tall, much-branched stems, whilst in colour they are of a very distinct rosy shade, quite unlike those of any other variety. Mr. Prichard says it has proved quite hardy with him, and passed last winter in the open ground unprotected.

Rosa indica.—During many visits to Kew this season we have never seen the plants of this lovely wild Rose without bloom, and now it is brighter than it has been all the season, each bush in the group bearing many brilliant flowers. The true perpetual blooming habit that we see and enjoy so much in the great family of Tea Roses is as apparent in this, one of the parents of that family, and it is a charming wild Rose, deserving a choice or favoured spot in the garden in association with its offspring.

Gentiana linearis.—In the interesting paper upon this genus in last week's Garden the above very fine species is omitted. It grows in an erect tuft 6 inches to 9 inches high, flowering in the freest possible manner and is not in the least fastidious as to soil or position. It is amusing to read the advice to pot off seedling plants of G. acaulis, &c., and to expect them to flower when three years old. Here the seeds are sown in the open ground, and such as acaulis, septemfida, asclepiadea, &c., always flower strongly the second year after sowing and are then large tufts.—T. Smith, *Newry.*

Campanula Vidali.—Out of a number of seedlings of this which I raised a few years ago but two or three remain. During the winter months mice have a great fancy for the bark just above ground, which they gnaw off, with the result that the plant dies. It seems very impatient of disturbance at the root. If allowed to become pot-bound as the roots attach themselves to the sides of the pot, the process of forcing out seems to distress it much, and it is some considerable time after repotting before it recovers itself. It is, therefore, best not to delay shifting too long.—J. M., *Charmouth, Dorset.*

Solanum Seaforthianum. — The Solanum family contains quite a number of really beautiful flowering species, few of which, however, are seen in gardens, except at Kew. The species under notice was introduced early in the present century. It is a beautiful stove climbing plant, and those who have the space and convenience to grow it would certainly be delighted with its prolonged

display of pretty flowers. It is almost a counterpart of the better-known S. jasminoides, the flowers of about the same size as in this species, and similarly disposed in clusters, but they are of a distinct shade of light lilac-purple colour.

Helianthus rigidus Miss Mellish.—Perhaps the finest hardy flower to be seen at Kew at the present time is this handsome form of the Prairie Sunflower, which fills a large round bed and is a brilliant mass of rich colour, heightened in effect because so admirably placed, with a Yew hedge as a background and the bed isolated on the turf. The plants were wisely divided up and confined to single crowns planted at a considerable distance apart; consequently the flowers are finer individually and more numerous also, as with abundance of room the stems produce lateral flower branches down nearly to the ground. The flowers of this variety are large, made up of many rays of great width and extra richness of colour.

Roscoea purpurea.—This plant, although said to be quite hardy—and perhaps the only known one of the Ginger family that is so—seems to me more suited for pot cultivation. By its curious flowers as well as its foliage it may easily be taken for an Orchid. The blooms are not produced very plentifully at one time, but go on showing in succession over a considerable time. A pot specimen here has been flowering for over two months, yet it shows no sign of exhaustion, buds still continuing to succeed the expanded flowers. It is of the easiest cultivation; when it dies down it can be put aside in any plant house corner, in spring shaking it out and repotting in good rich loam and standing it under a sunny wall until it begins to bloom.—J. M., *Charmouth, Dorset.*

The perpetual-flowering Acacia (Robinia pseudacacia semperflorens) is all that the name implies, and a tree that should find favour and be generally planted in gardens. A few evenings back when walking along a quiet street in a London suburb we suddenly came upon three fine trees in profuse blossom, and the flowers made quite a conspicuous display in the twilight, although the full beauty of the trees could not then be seen. An inspection since by daylight shows them to be three unusually fine and flourishing specimens of this tree. Two or three graceful racemes of bloom hang from the still growing shoots, and there are yet other sprays developing that will maintain a succession of flowers for several weeks to come. There are very few trees that continue flowering to this late period, and certainly this Acacia is the finest of them all now.

The yellow Balsam.—It may be of interest to some of your readers to learn of a Scotch habitat of Impatiens Noli-me-tangere (the yellow Balsam), about which Sowerby was in some doubt. The plant was found growing in a damp situation in a shady wood near Wells House, Jedburgh, which place I have rented for three months. My daughters brought some of its flowers to me for identification, as they did not know it and had never seen it before. After examination and comparison I decided that it was the above-named plant, and so named it. I find there are many specimens distributed through the wood, and one which was uprooted and placed in some damp Moss in a pot in the hall was looking quite fresh and vigorous when I saw it yesterday (August 23) before returning here. This plant measured 3 feet 9 inches high by 2 feet wide.—O. O. Wrigley, *Bridge Hall, Bury, Lancashire.*

Rudbeckia nitida and R. speciosa.—The season when many yellow composites bloom is come again, and yellow is a predominating hue among the flowers of the time. If the best of the Coneflowers and Sunflowers are boldly planted in gardens, there will be plenty of colour in the garden now. The two species here noted are both very fine at Kew. R. nitida is as yet little known and uncommon in gardens, but clearly it deserves to rank amongst the best of its kindred. A group of it at Kew is a mass of bloom, the shoots, which are about a yard in height, being branched pyramids of flowers. A coloured plate of this Rudbeckia was given in The Garden for March 23 of this year. R. speciosa is better known perhaps as R. Newmanni, and it is needless to say much in its praise, as it is a popular garden perennial. Two beds filled with it near the Water Lily house at Kew command admiration and deserve mention.

The Tamarisk.—Although this is a familiar shrub in certain seaside gardens, one hardly ever sees it inland. It is a strange omission on the part of garden planters not to have a shrub that is a perfect embodiment of grace and beauty. This note is suggested by a beautiful specimen just seen in a little suburban garden, a noble plant indeed, as refreshing in its rich verdure and pleasing distinctiveness of habit within the smoke zone as it is in many an arid seashore district on the south coast. The plant in question was a large one, and had evidently been cut back closely at some period, but it is now a branching, spreading mass, with wands 12 feet in length, as graceful as Pampas plumes, and terminated by a long, drooping, branched raceme of tiny blossoms. A shrub of such a distinct aspect, and withal so easy to grow, might be made a pretty feature in gardens.

The white Zephyr Flower (Zephyranthes candida).—Although most of the Zephyr Flowers are rather difficult to manage and flower successfully, there is one very noteworthy exception in the species under notice. At Kew there is a quantity of it which forms a pretty edging to a narrow border of bulbous plants that require the sun and shelter that the situation affords with its southern aspect and reflected heat and light from the glasshouses along whose base the border is. Few bulbous plants grow thick enough to make an edging and flower freely as well, but the edging of this plant is a perfect one, whilst it sends up from its thick tufts of narrow Rush-like leaves a profuse and prolonged display of flowers. These are like a small white Crocus, and the resemblance is even stronger when one sees an edging such as that under notice with hundreds of pure white cups wide open in the sun showing their yellow anthers. A coloured plate of this pretty species was given in The Garden of Feb. 15, 1890.

Obituary.

Death of Gustav Sennhulz.—With regret I have to inform you that on August 24 M. Gustav Sennhulz, superintendent of the town gardens, Vienna, died here after a short illness, which he had caught on an excursion through Dalmatia, where he had gone to study the vegetation. The deceased was born in 1850 at Frankfort-on-the-Maine. He began his gardening career at Wilhelmshohe, near Cassel; afterwards he attended the course at the Royal Horticultural School at Potsdam, and became landscape-architect with Siesmayer at Bockenheim, Frankfort-on-the-Maine. His successes made him also known in Austria, and as they were in the year 1884 in Vienna in want of a good landscape gardener, he was selected for this position. His loss will be deeply felt, more especially as the town is just now to be greatly enlarged, and consequently many new gardens will be laid out. Sennhulz also fought in the Franco-German war, 1870-71, and was wounded. He possessed the medal in remembrance of that war, and His Majesty the Emperor of Austria conferred on him the Golden Cross of Merit for his success in landscape gardening.—Louis Kropatsch.

The weather in West Herts.—On the 22nd the temperature in shade rose to 79°, but since then the days have been cooler, although the nights have remained very warm. During the week the temperature of the soil at 2 feet deep has fallen 2°, and at 1 foot deep, 4°; the reading at the latter depth, however, is still about half a degree above the average for August. Rain has fallen on six days, the total measurement amounting to more than 1¼ inches. Of this amount nearly an inch fell during a severe thunderstorm which passed over Berkhamsted on the early morning of the 22nd. During the height of this storm rain and hail were falling for 10 minutes at the rate of over 3 inches an hour. The hailstones, which were very large, did much damage in the garden. Roses, Dahlias, and Chrysanthemums were greatly injured, and in some cases the flower buds were cut off. The air remains dry, while the winds have again come from some point of the compass between south and west.—E. M., *Berkhamsted.*

Cypripedium Lord Derby.—Allow me to point out to you a mistake in your issue of August 17. In the report of Orchid committee you state that Mr. Statter and Messrs. Sander and Co. received a first-class certificate for Cypripedium Massaianum superbum. It was only Mr. Statter that received that honour for a Cypripedium at the meeting. It was shown as Lord Derby. The cross of C. Massaianum is C. superciliare × C. Rothschildianum, the cross of Lord Derby being C. Rothschildianum × C. superbum, the flowers of the one quite different from those of the other.—Robert Johnson, *Stand Hall Gardens, Manchester.*

*** We are asked to state that the Orchid committee at the meeting on the 24th decided to certificate the plant as C. Lord Derby, the name under which Mr. Statter showed it.—Ed.

Lime-loving alpines.—Will any reader of The Garden kindly give me a list of plants that succeed where lime is, and also a list of those that fail where lime abounds?—H. M.

Destroying woodlice.—We should be glad if you would give us a remedy for destroying woodlice or sow bug, as we have large numbers attacking seedlings and Orchids, and doing a large amount of damage amongst Ferns.—M. & W.

*** In pits or frames woodlice may be destroyed by pouring boiling water round the walls to which they betake themselves during the day, care, of course, being taken that the boiling water does not injure anything. In greenhouses or stoves place slices of Potato on the stages among the plants, examining these every day and destroying the woodlice which have congregated under them.—Ed.

Trees on warm soil.—I have a border on the south side of my garden which is bounded by a paling about 7 feet high and planted with Larches 25 feet to 30 feet in height and 8 yards to 10 yards apart. These trees are needed as a screen for possible buildings on that side. The soil is sandy and impoverished by the roots of the Larches. What bright flowers or ornamental shrubs could you or any of your correspondents suggest for such a shaded and dry situation? What Evergreens would be likely to grow there? What Pine or Fir or other evergreen could be recommended as the quickest growing, most ornamental, and most effectual screen on a dry sandy and gravelly soil?—J. M. C.

*** Larches will not live long on such a soil, and our experience is that the best trees in such a soil are the Scotch Fir and the Yew. We should certainly substitute Evergreens for the Larch.—Ed.

Figures of Bamboos.—As we propose to engrave illustrations of the kinds of Bamboos at present in cultivation in England and in the open air in Europe, we shall be greatly obliged to any reader who, having photographs of Bamboos, would favour us with a sight of them.

Names of plants.—*Mrs. Knox.*—1, Broussonetia papyrifera; 2, Lonicera Ledebouri; 3, Heliopsis lævis.——*L. M.*—Odontoglossum citrosmum.——*Anon.*—Triosteum perfoliatum.——*J. M. S. P.*—1, Campanula pallida; 2, Gazania splendens; 3, Centaurea ragusina; 4, Henbane (Hyoscyamus niger).——*T. Taylor.*—An unspotted form of Oncidium Gardnerianum.——*M. P. Thomas.*—Red Truffle (Melanogaster variegatus).

Names of fruit.—*A. C.*—1, Apple Early Margaret; 2, Plum Rivers' Early Prolific.——*J. R.*—1, Pear Fondante d'Automne; 2, Seckle.——*Dunham Massey.*—1, Apple Early Margaret; 2, Plum Reine Claude Violette; 3, Plum Oullin's Golden.

No. 1242. SATURDAY, September 7, 1895. Vol. XLVIII.

"This is an Art
Which does mend Nature: change it rather; but
THE ART ITSELF IS NATURE."—*Shakespeare.*

ORCHARD AND FRUIT GARDEN.

GATHERING AND STORING APPLES.

APPLES are without doubt one of the most abundant crops we have had for some years, and the question arises, what are we to do with them? If taken to market now the most that can be realised for ordinary samples in this district (Sussex) is from 1s. 6d. to 2s. a bushel, small ones not being worth gathering. The very finest samples are not worth more than 2s. 6d. By-and-by we shall be importing large quantities from various parts of the world, while our own fruit has gone begging. It is strange that we should not be able to make a better use of the abundant crops when they are close to our doors instead of rushing them on to the market at such a ridiculously low figure. The finest samples of Ecklinville, The Queen, Frogmore Prolific, Lord Suffield, Stirling Castle, Warner's King, and others of a soft nature that will not keep, instead of being rushed on to the market at 2s. 6d. the bushel, should be converted into chips or preserved for use in April and May, when fruit of all kinds is getting scarce. We have yet much to learn from our kinsfolk across the Atlantic before we make the best use of our supplies. I do not propose to go into the merits of such a business, but simply to point out, now that we have such a wealth of this important crop, the absurdity of gathering and storing a lot of worthless samples that are fitted for no other use than making cider. Had the trees been relieved of half the crop some two months ago the samples would then in all probability have been worth the trouble of being gathered carefully and stored in the most approved manner.

Many people gather their Apples too soon simply because a few of the most forward fall, instead of waiting till they leave the tree freely. Whenever fruit requires force to cause it to leave the tree it certainly is not fit to gather, and should be allowed to hang for some time longer. Gathering is too often done in such a careless manner that most of the fruit is so bruised in the operation as to render it unfit for storage, much of it going rotten before it approaches ripeness. Wicker baskets are by no means the best for gathering Apples in, as the twigs press against the fruit in such a manner as to cause many bruises. Whenever these are used, a little soft hay or Grass should be put on the bottom to prevent the fruit from coming into contact with the twigs. I prefer baskets made of chips for gathering, as they are more even at the bottom, and therefore do not cause any bruises. When gathered, the fruit should at once be taken to an open shed and there carefully sorted, retaining only those samples that are perfect to be stored for long keeping; these should be taken to a cool, dark room, which can be kept at an even temperature. It is a great mistake to put Apples on open lattice-work shelves, for on such much of the juice is extracted, causing the fruit to shrivel before becoming ripe. There are many advantages gained by allowing the fruit to hang on the trees as long as possible, and not the least amongst these is the lower temperature during the daytime the fruit will be exposed to after being gathered. Many varieties, such as Northern Greening, Norfolk Beaufin, Reinette du Canada, Reinette Grise, Old Nonpareil, Court Pendu Plat, Baldwin, Baxter's Pearmain, Wellington, Winter Greening, Royal Russet, and others that do not ripen till after Christmas should be allowed to hang on the trees till well on into November. The exact time for gathering Apples can only be ascertained by trying if they will part from the trees freely. Some kinds, owing to their large size, are liable to be blown down by high winds, especially when planted in exposed places. For this reason shelter from the south and south-west should always be provided. Where Apples are only grown for home consumption a greater variety should be planted than when grown for market, as they will be required to extend over as long a season as possible. The long-keeping kinds should always be put in the coolest place when gathered, as by so doing their season will be prolonged. H. C. P.

Plum Cox's Emperor.—In neither private nor market gardens does this excellent Plum appear so frequently as it might do, for, according to my experience, there is no more prolific variety in cultivation. Trees planted against walls, or in standard, bush, or other form annually bear heavy crops; the fruit is also large, nearly round, and on our porous soil will hang for a long period without cracking. Planted against a wall and the roots supplied with ample nutriment, the fruit attains magnificent proportions and deep colour. Such fruit is fairly good for dessert, and when other varieties have been a failure I have frequently had to depend upon Cox's Emperor for a change on the dessert table, but unless, as stated, ample nourishment is given the roots the flavour is decidedly poor, and on heavily cropped trees quite disagreeable.—W. G. C.

Apple Blenheim Orange.—In every direction there are extraordinary crops of this esteemed Apple. In many of the Herefordshire orchards old trees that have scarcely produced any fruit for years are this season laden with fruit, which is of fair size and very clean. Already farmers and others are inquiring as to the value of Blenheims, and dealers are offering very low rates—indeed, as low as 4s. per cwt., informing the intending seller that the markets are glutted, and fruit will become cheaper still, as there are such enormous crops throughout the country. It is true that the rain came in the nick of time to save the fruit crop, which is much better than anticipated, but in face of the acknowledged short supply in America I believe that prices for good Apples will very shortly rise, and those fruit growers who have good crops of Blenheim Orange or any other large Apple will find it greatly to their advantage to keep their fruit until late in the season, when considerably enhanced prices will be realised. If the dealers bought that class of fruit now they would store it, and only re-sell again when they could make three or four times the price they paid for it.—W. G. C.

Planting out Pines.—The note by "J. C." (p. 145) is interesting. When at Frogmore last year I was shown some splendid Pines which were planted out. This of course is not new information as regards this famous garden, as at Frogmore they have been so cultivated for many years. My guide informed me that such treatment involved only a minimum of labour in comparison with plants grown in pots, although they did not show fruit so early. Has "J. C." or other correspondents noted that the best Pines are invariably produced in pits or low houses? If Pine growing should ever again become fashionable, pits or low houses will be found to be the best structures for their accommodation.—A. YOUNG.

Raspberries.—The article on Raspberries by Mr. Engleheart is very interesting, and well worthy of close perusal by all interested in their culture. I shall certainly try leaving some canes at a distance from the parent stool to note their behaviour. If treating Raspberries as biennials increases the size of the fruit, it will be a system well worth practising, if only for a few fruits for dessert, as after the Strawberries are past, Raspberries are appreciated by many people for breakfast. I also quite agree with Mr. Engleheart as to leaving the canes their whole length. It was a hint I gathered from an old Lincolnshire gardener. There is really no benefit derived from shortening the canes, as many people suppose.—A. YOUNG.

APPLES NEW AND OLD.

I HAVE had very forcibly brought to my mind this season a remark the editor made a few years ago in reply to a correspondent who had sent him a note regarding a new Apple he had been growing. The editor's remarks were to the effect that the raising and distributing of new sorts of Apples were being overdone, as there was plenty of good sorts of Apples for all seasons if cultivators would only give the older sorts as much attention as they gave the new. These remarks have been justified by facts that have come under my notice this season in the case of two sorts of Apples that have been a long while in cultivation. I allude to the White Astrachan and Duchess of Oldenburg. Unfortunately, I only planted a tree or two of these sorts when making a new garden seven years ago, as every season since they came into bearing I could have sold ten times the quantity of fruit. The fruit of both is so handsome, that there is a rush for it as soon as it can be had. Duchess of Oldenburg is the handsomer of the two and the greater favourite with my customers. Everyone may not perhaps like the juicy spicy flavour of this sort, but the majority of people do, while the taking appearance pleases everybody, and as a free-bearing and regular cropper there is no sort that surpasses it. It is as good for cooking as for dessert. White Astrachan is the earlier of the two, being ripe generally early in August, and on my bush trees, where the fruit is partially shaded by the foliage, it is a much handsomer Apple than Beauty of Bath and of decidedly better flavour. My experience is only another proof that in the case of Apples for market, the handsomest samples realise the best price. J. C. CLARKE.

Taunton.

MORELLO CHERRIES.

IF trees worked on the Mahaleb stock could always be planted it would be a good thing for gardeners. In many instances through selecting such trees success has been attained, and before condemning the soil or garden as unsuitable for the good culture of Cherries, it would certainly be advisable, as recommended by "S. H. B.," to give these trees a trial. If Morellos are to succeed, the trees must be encouraged to root near the surface, and the less these are disturbed by digging or forking over the ground the better. This, followed by close cropping of the borders, is answerable for many failures. The best Cherry trees grown in the open as standards are always found on grass land, as in such positions the surface roots are obviously undisturbed. This conveys its lesson to be followed in gardens where the trees are trained against walls and with the roots in confined borders. So much do I believe in this detail being closely followed, that the border in this garden, which is devoted to Morello Cherries, is wholly given up to them. As each season comes round the trees carry heavy crops of fruit, but even non-disturbance of the soil will not ensure success without perfect drainage. A few of the trees are more marked in their healthy appearance than others, these at the time of planting having had extra attention bestowed upon them in the preparation of the stations. A well-drained soil is essential to success. Knowing this, after the soil was taken out, each station had a tile drain laid from the wall across the border into the wal

drain, the bottom being further laid with old roofing tiles, and over these a layer of old brick rubbish. The soil when being filled in had an admixture of burned garden refuse and wood ashes, in which the trees have thriven admirably. Being a cold, clay soil, the back of the border is also raised quite 18 inches, sloping gradually to the front.

The best season for what pruning is necessary is immediately after the fruit is gathered. The wounds from the shoots so removed quickly heal over, when the laying in of the young growth should follow at leisure. Such work being rather tedious where there are many trees to go over, should all be finished in the autumn before the advent of cold weather. In selecting trees for planting do not upon any account have those which have been cut back several years in succession to keep them within saleable bounds, as the wounds so made are often the source of whole branches dying away after the trees have furnished a good extent of wall. The best trees are those of two or three years' growth. In laying out the framework of the future tree take particular care not to split the base of the shoot or branch at its junction with the older wood. Gumming at such points will surely follow, although the branches may not die away for a few years.

A. YOUNG.

Apple Newtown Pippin.—I certainly agree with Mr. Hendricks in his assertion that the Newtown Pippin is superior in flavour to either Ribston or Cox's Orange, and this I say after tasting the two latter from various counties in England. Good as the Ribston is, it certainly in my opinion lacks that refreshing juiciness so prominent in a well-finished Newtown Pippin. Cox's Orange from some soils and districts is of delicious flavour, while from others it eats dry and almost flavourless; in fact, I know of no dessert Apple more particular as to soil and locality. The Ribston does exceedingly well in this garden grown as an espalier on rather sandy soil, the flavour of the fruit being superior to that of any I have tasted in other places; yet for all that I must say that the very best samples are not equal to the Newtown sold at the West-end shops. As Mr. Hendricks says, many inferior samples of Newtown are imported, and it is after tasting these that comparisons are often made.—J. C.

The Apple crop.—It is a matter for congratulation with this season's Apple crop that, although somewhat partial, there is a capital yield from those varieties that we find most useful. The desirability of making yourself acquainted with those sorts most suitable for different districts and soils, and of ventilating the information thus obtained, cannot, I think, be over-estimated; it is a wonderful help to a gardener in a new place, or if he has to start planting soon after taking over any garden in a district comparatively new to him. The experience of several years goes to show that on this light sandy soil the three most useful dessert Apples are King of the Pippins, Adams' Pearmain, and Cornish Aromatic; that is, they are varieties that crop well and consistently, the fruit well up to the average in size, and keeping individually well. They succeed each other well, the King being followed closely by Adams', and Cornish Aromatic taking the place of the Pearmain. Earlier dessert varieties are not required to any extent; our best croppers of these are Mr. Gladstone and Kerry Pippin. Cox's Orange is very shy, below average in size, and with little colour. Much as I like the Apple I should not plant it again. The Ribston is a failure, and Claygate Pearmain, I imagine raised in the neighbourhood, but on very different soil to ours, is also a very shy cropper. Besides Cornish Aromatic, Cockle Pippin is decidedly one of our best late dessert Apples. It crops well, but individual fruits are not so large as those I remember from good trees in Sussex orchards. Kitchen Apples that do well with me are much more numerous; indeed a couple of dozen sorts might easily be selected in their respective seasons of which it might fairly be said that they were of nearly equal merit. Perhaps for combined cooking qualities and consistent cropping, five of the best would be Lord Suffield, Warner's King, Cox's Pomona, Blenheim, and Wellington. This, it may be noted, applies to old trees of Blenheim. Here, as elsewhere, it is a long time before the planter has any return from Blenheim. Yorkshire Greening is a very heavy cropper as a standard; the spreading horizontal, almost drooping, growth of this variety is quite unique, and enables one to pick it out easily from among its fellows. I may note that our Apples are better coloured this year than in any previous season; as a rule they are very deficient in that respect.—E. BURRELL, *Claremont.*

OUTDOOR FIGS.

IN the great majority of gardens most Fig trees were killed down to the ground-line by the severe frost of last winter, and many of the same have thrown up abundance of growth again from the soil. In most instances many more shoots have sprung up than ought to be permitted to remain, and if not already done, it will be advisable to immediately remove a portion of these surplus shoots, also pinching out the points of those growths that are allowed to remain. By doing this the wood will become thoroughly ripened and the buds so well developed, that a crop may reasonably be expected next year. At present much of the new growth is very tender, and if we should get a sharp winter again, it is very possible that all may be killed down to the soil once more, and not only a crop lost, but also valuable time. I have before alluded to the great benefits arising from summer and autumn pinching of Fig growths, but may be permitted to again strongly urge the importance of putting a check on all gross shoots by taking out the points, and so regulating the wood that each leaf has ample room for development. It may appear folly to allow so much room for the shoots, but if a crop can be secured every year by following out that system, the advantage must be evident to the most sceptical. I have a very old Fig tree here that my employer always looks upon with affection, not only for its age, but for the fine fruit it annually produces, and though the last winter's frosts somewhat crippled it, the size of tree was not much reduced, nor is the crop this year a failure, though not so heavy as usual. The question arises why this and other trees here should suffer so little, and in gardens round, equally, if not better situated, the trees should suffer so terribly. I have been wondering if pruning, or rather summer pinching, accounts for the difference. I am inclined to think it does, and as a case in point I may mention that a few weeks ago I visited the garden of Lord Tredegar, near Newport, Monmouthshire, and in the course of a ramble through this well-managed place with the gardener (Mr. Hollingworth) we came to a wall covered with Fig trees in capital health and bearing the heaviest crop of large Figs I ever saw outdoors. On remarking how well they had stood the past winter, the answer was, "No injury was done at all, and yet Laurels and other shrubs, also vegetables, suffered badly." On examining the trees more closely I noticed that Mr. Hollingworth pinched out the points of all shoots as soon as they had made three or four leaves, and as new growth was made the process was repeated. This system, he informed me, had been practised for many years and always with the most satisfactory results both as to the health of the trees and the crops they produce. I may add that I never saw that delicious Fig, White Marseilles, in such grand form outside as on the trees under Mr. Hollingworth's charge, the crop being enormous and the fruit of extraordinary size, proving that pinching suits the variety admirably. Brown Turkey was also in prime condition grown on exactly similar lines. There are many causes of Figs being unfruitful that pruning will not put right, and one of the chief, I believe, is a lack of potash in the soil, more particularly where the soil is light and sandy. This element enters largely into nearly all fruits, and when such a necessary constituent is exhausted within reach of the roots it is not astonishing that Figs are continually absent on the trees, or if they do appear the major portion turns yellow and drops prematurely. All sorts of reasons are given why this dropping occurs, such as drought, bad seasons, unsuitable soil and positions, in fact everything except the correct one. Where the trees have been barren for some time, I can recommend the application of potash in some form or other, and if the border is firm, with a mixture of lime rubble in the soil, the pruning also done as advised, a crop will be assured. The form in which I apply the above is muriate of potash at the rate of 2 ozs. to the square yard when the roots have a limited run. Kainit may be used in place of the muriate of potash, if more convenient, at double the strength named. The present is a very suitable period to apply either of the fertilisers.

W. G. C.
Ross.

FLOWER GARDEN.

CULTURAL NOTES ON HERBACEOUS PHLOXES.

GIVEN a selection of these Phloxes, such as that at p. 99 of THE GARDEN, we have at once the material for creating a rich display of their flowers. There is a deal of truth in the concluding remarks on the Chiswick Phloxes, "that they are rarely seen well grown in private gardens" and that they are "deserving of better attention." The summer of 1895 will long be remembered as one distinctly opposed to the well-being of this showy group of plants, for the long-continued heat and the entire absence of rain caused them in many districts to droop continuously. The result of this is blindness in many of the finest trusses, especially where the plants are somewhat crowded and in need of division. Apart from the heat, however, of this year there are other items, chiefly cultural, that are responsible for the half-hearted way in which these plants are grown, for if we would have their massive panicles of bloom in our gardens in perfection, they must be treated with the greatest liberality from the first. Unfortunately, these plants lend themselves too abundantly to division of the stools. I say unfortunately, because I believe that much unsuitable rubbish is in consequence distributed, and from which it is hopeless to expect any really good results. Stools that have stood for several years in one spot till they are a solid mass of weakly, puny stems and centres more like Boxwood than aught else can never produce fine heads of bloom even when transplanted into good soil. In those instances where the plants are more than three or four years old the best results are obtained from cuttings, but up to the age named these plants may be divided and replanted with very good results. Care, however, should be taken to employ only the younger parts of the plants, viz., the outer growths of the stools. The central growths are generally puny and weak and often refuse to grow in a satisfactory way. When employing the outer growths of the plant these should always be planted singly.

This is most important in the production of large, handsome heads of bloom. Such pieces as these, more especially if taken from ground plants, will a year hence produce from four to six heads of bloom according to their strength. It is now an excellent time to do this work while there is foliage remaining of the present year; indeed, there is no better season in the whole year for planting these herbaceous Phloxes than early autumn; they have then plenty of time before winter arrives to take good hold of the soil. A year or two since I gave a friend and neighbour a plant of an excellent white kind which I possess. It was a single stem, of the size of a small penholder and fairly rooted. When handing it over I pointed out that it possessed some half dozen breaks at the base, all of which would flower well next year, provided it was planted while still fresh. This was done, and to the surprise of its owner this tiny plant produced six massive heads of bloom of the snowiest white the following summer. In the following year, that is, the second year of planting, this same plant produced exactly twenty-four magnificent heads of bloom, an average of four to each of the stems of the previous year. As then seen it was the grandest single specimen of a pure white Phlox I have ever seen. But there is no difficulty in securing such results; indeed, any reader of The Garden may have similar success by following a few simple, yet important, rules in their culture. In the first place it is most important that the soil be very rich and worked quite 2 feet deep. In this there should be no stint. Dig a hole 2 feet square in the ordinary garden soil, and work in about one-fourth of well-rotted manure; stir the latter well with the soil, but not too deeply in, for these Phloxes are also great surface rooters. Now return the soil, and finally put your plant quite firmly in the centre of the hole, and in a slight depression. This last will admit of thorough watering in dry weather. A mulch of manure may be added for the winter, but it is not essential. If a bed is required, a similar mode of preparation will be needed, but in this case it will be to the advantage of the Phlox that the usual rounded surface should be dispensed with. In summertime all that is needed to make these Phloxes a success is plenty of moisture at the root. Given a thorough soaking twice weekly, one of these being of liquid manure from the stable or cow house, well diluted, this will prove of great help at flowering time. Endeavour always to obtain fresh young plants from the ground. Failing these, all pot plants should be shaken clean out of the soil, never planting in the solid ball as received. These plants are easily increased from cuttings in autumn or spring, preferably the latter, employing a manure frame and the fresh young shoots of the year. Under such conditions rooting takes place in a month, and when hardened off, the plants should be put at once into rich ground. Many of these will flower the same year. Thus grown these Phloxes are a source of pleasure and a great attraction in any garden. A few beds of the most distinct kinds should prove decidedly ornamental in the large public parks and gardens in and around London. E. J.

Androsaces.—Mr. Wood, in his interesting and practical "Notes on Hardy Plants" on page 101 of The Garden, gives the names of several Androsaces doing well in Yorkshire. To the names given I should like to add six more varieties, which, though they may not be suitable for the north of England, are certainly doing exceedingly well in Devon, Cornwall, Somerset, Surrey and Sussex. Why this should be so is difficult to say, as these plants in their native homes inhabit very cold regions; but probably the more even temperature and moisture near the south coast are more congenial to them than the bleaker districts of the north, especially near large manufacturing towns where the atmosphere is laden with impurities. The varieties I would add are Androsace pyrenaica, A. cylindrica, A. obtusifolia, A. lanuginosa, A. l. Leichtlini and A. Chumbyi. Of these the first three are rare, and as they are of very slow growth they require a select corner to themselves, but the last three grow rapidly and should be in every garden. A year or two ago it was mentioned in The Garden that A. lanuginosa would not do well in the north, but here in the south it grows without any trouble, and I could mention many places where plants of that variety have occupied the same position for a dozen years without showing the least sign of their vigour being used up. —F. W. Meyer, *Elmside, Exeter.*

Galtonia candicans.—Reference is made on p. 116 to this charming bulbous plant. I find it extremely useful in many ways. I take up some bulbs in the autumn, pot them into 6-inch pots and keep them cool and on the dry side during the winter in a cold frame. These grow strongly in spring and are most useful for planting in the flower beds in May. Treated as a hardy plant it is well worth attention; the deep green leaves and pure white bell-like flowers are handsome and much appreciated. In some gardens where the soil is somewhat light this Galtonia flourishes well, but in others, where the soil is inclined to be heavy, the bulbs suffer from too much moisture during the winter, and consequently do not flower so strongly. At Highclere Mr. Pope has a border 60 yards long and 6 feet wide quite full of it. —E. M.

Cosmos sulphureus.—This new introduction of Mr. Thompson's, of Ipswich, has been in flower in my garden for some time past, and has proved itself a vigorous half-hardy annual, of the easiest culture, and well adapted for town gardens. It is well marked by its five bright yellow, oval ray florets and neat foliage, divided into small linear-lanceolate segments. The plant seemed somehow familiar to me, and I find that there is a striking similarity between it and a woodcut of Bidens humilis, published some years ago in vol. xxvi. of The Garden. Can any of your readers inform me whether the two names represent the same plant, or whether they are species of the same genus? It is well known that the two genera are closely allied to each other. I have not kept the description that accompanied the woodcut, so that my remarks are based solely upon the figure itself.—R. C., *Kensington.*

*** In reply to the inquiry of "R. C.," I can only say that I received the seed of Cosmos sulphureus (Cavanilles) from the Imperial Botanic Garden, St. Petersburg, in the spring of last year, and have assumed the correctness of the name, notwithstanding the inapplicability of the specific designation sulphureus, the colour being, as stated, a bright full yellow.—W. T., *Ipswich.*

Lychnis fulgens Haageana.—Very pretty and effective are two beds of this perennial which I noticed at Kew a few days ago. It certainly justifies the name, owing to the intense brilliancy of the flowers, which are each nearly 2 inches across, and include nearly every shade of colour from bright scarlet to pure white. The plant grows to a height of 1 foot and is of very easy culture, succeeding admirably in almost any ordinary garden soil. The many variations in colour produce a most pleasing effect. I was so impressed by its appearance in the beds at Kew, that I have decided to use it for a similar purpose next year.—H.

Limnocharis Humboldti is a fit companion for even the best of the hybrid Nymphæas. It should find a place in every water garden, notwithstanding the fact that it is not perfectly hardy except in very warm sunny positions in the south. It will, however, succeed if a little shelter is afforded, and if this is done the slight trouble will be amply repaid. It is very distinct in character, graceful and free-flowering, continuing throughout the summer. The flowers, of a rich golden yellow colour, single, with but three petals each, in shape closely resemble those of a Convolvulus. The length of each petal is about 2 inches and the flowers are beautifully fringed. The leaves, which are of a lively green colour, float upon the surface of the water.—H.

Aponogeton distachyon (Cape Pondweed) is quite hardy in shallow water. It produces large white, Hawthorn-scented flowers, the scape two-spiked, the spikes varying in length from 2 inches to 4 inches. The flowering season is very prolonged, lasting from spring till autumn. When planting it in a lake, the young plants should first be established in a large pot or basket in a tank or fountain-basin, and then be put out into their final position, where the water should be clear and free from weeds. This ornamental little plant does well at Chiswick in the fountain by the large vinery.—H.

FLOWER GARDEN NOTES.

Specialities.—It is generally in the herbaceou and annual classes that one meets with new thing that make a unique and striking display in bedding plants or those that are classed as such. Anything very much out of the common or that is a great improvement on existing varieties only makes its appearance at rare intervals. With the more easily grown plants it is on the other hand especially noticeable that not a season passes but one is able to pick out several things which, if not absolutely new, play for some reason a very important part in the flower garden arrangements. I had a packet of seed this year of a new form of Nicotiana affinis, and sowed it with the firm impression that it was not likely to turn out any improvement on the type. It is, however, a decided improvement, the plant being more sturdy and the individual flowers larger. At the time of writing (August 20) there are many plants from seed sown at the beginning of February that are nearly 4 feet high and quite as much in diameter. This is a capital dry weather plant. If one can once get it on the move it is quite indifferent to a prolonged drought. I have been interested this year in a batch of Tropæolum speciosum. Doubtless many readers of The Garden have seen the recommendation "that the sun ought never to shine on the plants." This statement, however, may be very considerably qualified. Given an old stump of large size that has to be clothed with foliage, the Couch-like roots of the Tropæolum may be planted on the shady side, not necessarily quite out of the sun, as one of my best clumps gets all the afternoon sun. The ground should be deeply dug and well manured, using a heavy manure if the soil is naturally light, a surface mulching being added after planting to keep in the moisture. A few twiggy Pea sticks inserted in the ground with their tops leaning towards the tree stump will afford the Tropæolum a support in the early stages of growth. I suppose after the winter of 1894-5 one cannot praise too highly those varieties of Carnations that came safely through and furnished an excellent display during the summer. Of Mrs. R. Hole, Raby, and a deeper Pink than Raby with Clove foliage I did not lose a plant, the next three best being Murillo, Sir Beauchamp Seymour and Ketton Rose in the order named. The wealth of bloom, too, provided by individual plants was extraordinary and quite unexpected when one remembered the dry, withered-up appearance of the plants after the break up of the February frost. The weather has been very favourable for the layers ever since they were put down. I should like to say a word in favour of Tufted Pansy William Niel, not because it is better than many others from a flowering standpoint, but because of its unique colour; it makes a lovely bed associated with pale Fuchsias, a few plants of Marguerite, or the Sweet Tobacco named at the head of these notes. Writing of Fuchsias reminds me that the Duchess of Edinburgh, scarlet sepals and

purple corolla, a vigorous variety and very free has proved itself one of the best of that colour for outdoor work. Despite its vigorous habit it keeps very sturdy, and holds its flowers longer than most varieties. I have a capital bed just at present of Achillea ptarmica The Pearl quite a sheet of white. It was planted last autumn, and, bearing in mind its leggy habit, the shoots were pegged here and there to cover the bed so soon as they had attained a fair size, the result being a very well furnished bed, the heads of flower standing a little over 2 feet from the ground. A very pleasing and effective contrast on borders is afforded just at present by clumps of this Achillea similarly pegged in close proximity to nice-sized groups of Montbretia crocosmiæflora. The rains which came towards the end of July, followed by another spell of warm weather, were a wonderful help to the Sweet Peas. We were late with them this year, not being able to sow until nearly the middle of March; the birds helped themselves rather liberally, and they made headway very slowly through the long drought. They have now, however, thoroughly furnished the sticks, and, given prompt and constant removal of seed-pods, will remain in flower a long time. I am decidedly in favour of pronounced as opposed to uncertain shades, and think Emily Henderson, Captain of the Blues, Princess Beatrice, Firefly, and Splendour are hard to beat. As with many other things, a good mulching of manure was of wonderful service to Sweet Peas through the late summer. Of annuals previously recommended in these notes, I have found the miniature Sunflower and the varieties of Malope and Cosmos extremely useful, making a brave show on the borders and invaluable in a cut state. All, too, possess the merit of holding out well until the season for border flowers is getting nearly over. I came across an interesting plant the other day in a cottage garden in Salvia sclarea, known locally as Clarey. There was quite a large patch of it, and as in addition to the quantity it had evidently been carefully tended, I had the curiosity to inquire the object of such extensive and careful cultivation, and was told it was grown annually for the purpose of wine-making. I can personally vouch for the fact that it really does make an excellent light wine.

Staking herbaceous plants.—Although I do as little of this as possible, the heavy rains have caused such strong growth, that in many cases a little support is absolutely necessary, particularly so with plants with heavy foliage that have grown higher than usual, or with very large heads of flower, as some of the newer Phloxes. There is nothing better for the purpose than round iron stakes of half-inch or three-quarter-inch diameter, sharpened at the one end, and varying in height to suit the requirements of the plants. They are naturally at the outset more expensive than wood, but really cheaper in the end, being practically indestructible. The tying should be so arranged as to avoid unnecessary formality, simply to keep the plants from breaking down.

The increase of herbaceous plants.—The power of self-production with little trouble to the cultivator in many herbaceous plants is very great, and it may be safely said, that given a few plants of each species, their numbers may be increased even in one season to almost any extent. In a recent note I referred to the marvellous crops of seedling Polyanthuses that were springing up where old seed-pods had not been removed. The hoe was put through the bed to demolish the seedlings, but again after the heavy rain they are making their appearance very thickly. In a portion of the pleasure ground where Rhododendrons were rather thin a few plants of Foxgloves were put out, and from the small beginning the sides of the hill are thickly studded with the plants at all points where there is a little open space. The Delphinium is another plant that increases very readily, countless seedlings being available if the old flower-spikes stand long enough for the seed to ripen, and a similar carpet of seedlings is always to be found under some of the dwarf Campanulas. I generally look sharply after the seed-pods on Tufted Pansies, but if a few are missed, the seedlings make their appearance in considerable numbers, and very useful varieties are sometimes obtained in this haphazard way. The power of reproduction at the root is also in some herbaceous plants very pronounced, so that once established it is not so much a question as to preserving the species, but (if that is deemed advisable) how best to get rid of it.

Claremont. E. Burrell.

HARDY PLANT COLLECTING.

To the Editor of The Garden.

Sir,—I have read with great pleasure and interest Mr. Burbidge's most sensible article contained in a recent issue. I may say that my previous letter elicited some replies (from Mr. Kingsmill, M. Van Tubergen, &c.) expressing readiness to join in the scheme. But without doubt the difficulties mentioned by Mr. Burbidge as necessarily associated with the employment of a collector and the absence of any well-known name in connection with the undertaking have rendered any general response impossible. But the prospect of tapping the hidden hoard of beauty which most surely lies waiting for us in the great unknown chain of the Southern Andes or equally unknown mountainous chains of the north is too good to be let slip for any objections so easily removed.

Mr. Burbidge's suggestion that, instead of risking everything in the costly and venturesome experiment of a collector, we should endeavour to utilise the innumerable outposts of humanity which are already stationed on the borders of the wilds we want to get at seems to me a most excellent one. We should practically be able to spend all our funds in subsidies to consuls, missionaries, trappers, traders, in fact all sorts and conditions of men in all parts of the world, to whom the chance of earning £10 or £20 in such an easy way would be highly acceptable. I say that we should be able to spend all our funds on the direct object of our scheme, because I am sure that there are several of us who from sheer love and interest in the thing would be glad to take turns at the secretaryship, and learn something of the extraordinary ways in which life goes on in some of the out-of-the-way parts of the world. It is particularly pleasing to think that the plan will probably be increasingly effective with each succeeding year as we learn the best channels in which to spend our money. I trust also that it will be an essential article of our creed that the national collection at Kew shall be enriched by specimens of all the new things we get. It will certainly be a most unusual and entertaining sensation to think when the little green shoots first put their noses up above the ground that perhaps they are going to be something as good as Heuchera sanguinea or Chionodoxa sardensis.

Arthur K. Bulley.

Francoa appendiculata.—For the last ten years I have grown this Francoa in the open border. With me the foliage dies down yearly; many of the crowns are killed, too, during the winter, in spite of a mulching of half rotten manure put over them in the autumn. It is, however, of such free growth that in the spring it quickly revives, and bears its pleasing flower-spikes freely.—E. M., *Bishop's Waltham.*

Stock Princess Alice.—This now well-known white Stock is grown in some places not only on borders for cutting, but on beds in the flower garden. It has been found to be such a continuous bloomer that there is no fear of a falling off in this respect from June to November, provided, of course, the plants are well managed. Previous to planting, the beds should be thoroughly well manured and the plants well soaked with liquid manure at frequent intervals, the surface of the beds also being well mulched. Another very important point is to remove all flower-spikes as soon as they are past their best. This lovely white Stock is seen to the best advantage when surrounded by an edging of Amaranthus or Iresine. It blooms so profusely and has such a branching habit, that many spikes may be cut from beds in the flower garden without being missed.—J. C.

Bedding Begonias.—There is something of a race being run now between the large-flowered Begonias and other smaller-flowered, free-blooming forms as to their qualifications for summer bedding, and also the fibrous-rooted forms, of which, too, we have so many at varying heights and of diverse colours and such wonderfully profuse and persistent bloomers. Begonia Worthiana is now seen in many gardens, and it is a great favourite at Hampton Court Palace. It has long been employed largely, but it seems possible that even so good a thing may presently be displaced by some of its progeny from a cross with a large-flowered crimson form, as there are in a couple of beds huge plants of such production in wondrously rich bloom just now, and these constitute the finest bedding Begonias I have yet seen. The flowers are of moderate size, single and drooping, but borne in immense profusion.—A. D.

TUFTED PANSIES.

It is pleasing to note that these are being much more freely used in public gardens in and near London than was formerly the case. The only fault seems to consist in planting rather too thickly, as they come into a solid mass of foliage by summer, and the flowers are not so good as would be the case if each plant had more room for development. Pansies have great value for beautifying gardens early in the year, but they can also be employed for embellishing them during the summer months. They may be had in capital condition through July and August by simply modifying the cultural details. For summer display the seeds should be sown in a cold frame not earlier than the end of August or in gentle warmth early in April. These small plants will not commence to flower freely until the end of May, and they will yield blooms of excellent quality for three months. They should be put into good ground that has been enriched with some well-rotted manure, and in light soils a mulch of the same will be beneficial. It may be said that having now-a-days so many fine summer blooming flowers we do not need Pansies at that time of year, but there are many gardens where dwarf-growing things are needed and glass accommodation for preserving or raising bedding plants is scarce. Where such is the case Pansies would be found very useful, as they are so suitable for small beds or for forming an edging to larger ones. In the case of autumn-planted Pansies that are to flower in spring, much may be done to prolong their effectiveness by keeping the seed-pods picked off and watering when needful, a little weak liquid manure occasionally being beneficial. Plants treated in this way will continue effective till August is far advanced. Last spring I very much admired a nice lot of Pansies that formed an edging to a bed on the Grass plot of a small front garden. About the middle of June the owner pulled them up to make room, he said, for bedding plants, and their place is now occupied by Lobelias, which are not nearly so showy, and certainly do not give the variety that the Pansies did. They were just in full beauty when they were pulled up, and they would have been good now had they got a little attention. Close by a cottager has two beds which were planted with Pansies at the same time, and they have been a mass of bloom from May up to the present time. Through the dry weather he kept them watered, and I see but little difference in the size of the blooms now and two months ago. Pansies do very well in a north aspect in the summer months, and in a hot, dry time the blooms come much better there than in the full sun. The plants must, however, get plenty of light and air, or they will become too weak to produce good blooms. J. C. B.

WHITEHALL, SHREWSBURY.

This is a beautiful old house built of red sandstone in the time of Queen Elizabeth, and though its walls are much worn by the storms of centuries, it is still in a perfect state of preservation and a delightful residence in many ways.



Whitehall, Shrewsbury. Engraved for The Garden *from a photograph by the late Mr. J. L. Robinson, C.E., Dublin.*

It is the property of Archdeacon Lloyd, who resided there until his removal to the rectory of Edgmond, in the same county, and is now tenanted by Mr. T. J. Provis. The house is situated in one of the prettiest suburbs of Shrewsbury, but its grounds are not extensive, whilst the outlying parts of the town now surround on all sides the ancient walls that enclose it. Inside of these walls, however, one hardly realises the proximity to a large and busy town, and the simplicity of the gardens is in perfect harmony with the situation, for anything like a pretentious display would certainly contrast harshly with the old house and its garden walls in part mantled with Ivy, and where unclothed none the less charming in the warm colour of the weather-beaten stone. The engraving we give shows the south or garden front, which looks out upon a lawn that could not be better adorned than it is by the few fine Larches and Hawthorns which stand upon it. The Larches, of which there are four, are venerable specimens, beautiful in aspect and branch-spread. A straight gravel walk just cuts off the lawn from the house, whilst little Box-edged beds and borders stretching its entire length on one side are filled with Roses, Pansies, and other flowers, such as Geraniums, Verbenas, and Petunias. At the end of this walk and at right angles to it is a little plateau or gravel terrace, from which one can look over the town and get pretty peeps of the distant landscape bounded by hills at the extreme limit of the view. On the opposite side of the house the lawn is flanked with shrubs, which hide one of the walls that enclose a kitchen garden of the good old sort, with square or rectangular vegetable plots and mixed flower borders. The Peaches on these walls were very fine—indeed, as large as we see them grown under glass, and with that deep colour on the sunny side that is only fully developed in the open air. The coping of these walls is a little flower garden in itself at certain seasons, with Wallflowers and Snapdragons the chief feature. The great attraction of Whitehall, however, is its ancient Walnut tree, the like of which, or indeed one at all comparable to it, we have never seen. It stands upon and extends beyond a plot of Grass beside the carriage entrance to the house. Its stem at 4 feet from the ground girths fully 16 feet, whilst at about 4 feet higher, where it divides into huge limbs, it would girth several feet more. The huge branches are in many cases supported by props, and there is hardly one but what has been shorn of half its length by storms, yet the tree is still vigorous. The diameter of its present spread of branches, as tested in two directions, is 36 yards. The Mulberry also grows and fruits well here.

Kitchen Garden.

SOWING SEEDS.

A great proportion of the seed sown annually in both flower and kitchen gardens fails either to germinate or to give satisfactory results hence seedsmen are made scapegoats for what is really due either to the ignorance or carelessness of others. Probably more disappointments have occurred in relation to spring-sown crops this season than in any other within living memory, the ground during March being in many instances in quite an unfit condition for the reception of the seed owing to the long-continued and intense frost, and it is to be hoped that many who have hitherto clung to the old practice of sowing seed of early vegetables on a certain day of the month, regardless of the fitness or otherwise of the soil and weather, will have learnt a life-long lesson. Quantities of seed of the early hardy varieties of Peas rotted in the ground, gardeners being anxious to get it in, fearing that the first pickings should be behind the usual date, Early Mazagan and Green Windsor Beans suffering the same fate. As a rule, too little forethought and care are bestowed on the preparation of the ground for seeds of early vegetables. How many allow the snow to melt and soak into the early borders instead of having it raked off, and how few there are who care to go to the trouble, as they say, of preparing during a slack time in winter a good heap of burnt refuse, leaf-mould, the sweepings of roads and drives, wood ashes

and similar ingredients invaluable for digging into early borders or for placing over seed Potatoes before finally filling in the drills. If those who have the means for doing this, but who now ignore it, would give it a trial, they would ever after practise it, even from a labour-saving point of view, especially where the soil is not of the lightest and warmest.

Sowing seeds by rule of thumb and when the season has advanced is a mistake. How often is a plot of Cauliflower or Cabbage which has drawn every particle of moisture from the ground cleared off and Beans or Peas sown immediately, a partial shrivelling of the seed, and consequent weakly growth, inevitably following. Far better would it have been to have waited a week, and then if no rain had fallen, to have well soaked the drills, sowing the seed twenty-four hours afterwards. This little extra trouble cannot be compared to the worry inseparable from failing crops and frequent blanks in the supply of summer vegetables. Even when the ground is not really dry it pays to give a watering as above described, as should a few weeks of drought occur, the seed takes no harm till rain comes. Small seeds, such as Cabbage, Cauliflowers, and Lettuce, often fail through being sown on dry ground, the meagre sprinklings given to the thin coating of soil covering them often being lost in evaporation during hot, dry times, and no encouragement given for the descent of roots. The best way to ensure success is to well moisten the ground to the depth of 6 inches the day previous to sowing, and to cover the surface with mats, bags, or litter until the seed germinates.

Such subjects succeed well sown in the partial shade of espalier trees, always provided the seedlings are thinned early and freely. I can speak from experience of the great advantage of slight ridges for early sowings of French Beans, especially of such varieties as Canadian Wonder, which are prone to rot in wet weather. Thus elevated, the surplus moisture escapes and the seed is saved. The ridge system should always be adopted where the early round-seeded varieties of Peas are sown in the autumn, a practice now almost extinct, gardeners finding that sowing in heat, duly hardening off, and planting out in March secure better results and save the worry of a constant warfare with mice. Sowing thickly, although so often denounced, is still commonly practised, the idea being to secure a good plant, but what is gained in quantity is lost in quality, as in nine cases out of ten thinning is not carried out in the nick of time, and crowding, with its attendant evils, follows. It is seldom that Peas are thinned, even if pressing each other in the rows, yet a little time devoted to such work would be a decided gain in the end, nothing being more antagonistic to a good yield than crowded haulm, which cannot possibly receive a maximum amount of sunshine and air. Amateurs frequently err in sowing Carrots, Onions, Beet, Parsley and similar things too deeply. When so sown, it matters not how good the seed, patchy and unsatisfactory crops alone can be expected. I have made it a rule for years to scuffle the surface of the ground several times in the forenoon of sunny days before sowing my early seeds in the kitchen garden, drawing out the drills at that time also that the sun may warm them, sowing and filling in during the afternoon, and am convinced that if attention be given to these little details—which some might call coddling — not only better, but much earlier crops of vegetables are obtained than by sowing at any given date without any special preparation of the soil. Many tender annuals which ought to be raised in heat and afterwards transplanted are sown in the open and too early in the season, amateurs especially erring in this respect. In conclusion, I would urge upon young gardeners the necessity of making a special study of this seed-sowing question, it being the pivot on which must turn much of their success or otherwise in future years. J. CRAWFORD.

Kidney and round Potatoes.—The distinctions which formerly existed between kidney and round Potatoes have been of late so broken down by the introduction of intermediate forms, that I urge committees wherever I can to do away with what is now a senseless division and invite Potatoes at shows as white and coloured only, as then there can be no question as to distinctness. How frequently do we see Beauty of Hebron long and the same variety short shown as both kidney and round in respective classes. The same thing is constantly occurring with long and round forms of Satisfaction, to quote only two sorts. But the distinctions of round and kidney serve no good purpose. It is true that every variety of Potato may have its distinguishing characteristics, but so many are of an intermediate long form literally neither round nor kidney, that they cannot be classified. If the old division be insisted upon in schedules, then the sorts eligible in each class should be specified. There can be no question as to the status of Snowdrop or Prizetaker as kidneys or of London Hero or Windsor Castle as rounds, but the bulk cannot be so classified.—A. D.

BOOKS.

MANURES AND THEIR APPLICATION.*

SEVERAL works, more or less elaborate, have of late years been published under very similar headings, but there is yet good room for this little pamphlet. Originally delivered in the form of a lecture, it was, at the request of its hearers, published in a cheap form, the author taking the opportunity of enlarging the work and giving fuller details where this was considered desirable. As Mr. Dyke states in the preface, there is not much that is new in his lecture, and he very rightly and properly gives a list of earlier writers on the subject to whom he is indebted for much valuable information. He has succeeded in compiling a really serviceable series of hints bearing upon the principles of manuring and the composition of manures, presenting these in a form that need not bewilder the merest tyro. All that the ordinary gardener, professional or amateur, need know about manures, the need for these and their application is given, and if on mastering this elementary pamphlet a student becomes ambitious to know more, there are plenty of works of a more advanced character abounding in technical phrases and tabulated information that will interest, if it does not exactly greatly instruct the reader. In the introductory chapter the various manurial elements and their uses are briefly discussed, a point being made of the fact that organic manures, notably those obtained from farmyards, blood and such like, are extemely slow in operation during cold weather, this pointing to the necessity for applying manures during the cold months in the form of nitrates, or otherwise growth of crops must be slow. Next comes "The study of manures, as to what they are and what they do," followed by a description of the different manures in use. These latter are divided into two classes—general and special. The former comprise farmyard manure, guano, ammoniated guano, native guano, manures from fowls, pigeons and such like, vegetable refuse and green crop manuring. These are supposed to contain nearly all, or quite all, the ingredients required by plants for their nutrition, whereas special manures are more or less incomplete. Included in the latter category are sulphate of ammonia, nitrate of soda, blood, soot, hoof and horn, shoddy and wool waste and leather scutch, all of which are of a nitrogenous character. Then we next have dried fish manure, bones, dissolved bones and phosphatic guanos, these supplying both nitrogen and phosphoric acid, nitrate of potash (better known as saltpetre), giving nitrogen and potash. Phosphoric acid and potash are supplied by phosphate of potash, and those manures which supply chiefly phosphoric acid are mineral phosphates, Thomas phosphate, or basic slag and superphosphate of lime. Manures given as supplying potash are sulphate of potash, muriate of potash, kainit and carbonate of potash. Other special manures alluded to are sulphate of iron, lime, salt, magnesia and liquid from manure heaps. How to apply these elements separately or in mixture is briefly set forth, not the least valuable advice being that which gives appropriate mixtures for a few of the most important crops grown in the vegetable garden; the author, however, being careful to add that "we must remember that the property and composition of soils determine what kind of manure it is best to apply. On this portion of his subject he might have enlarged with advantage. W. I.

* A lecture delivered to the Cheshunt, Wormley and District Horticultural Society by W. Dyke, Turnford, Herts.

FERNS.

TODEAS.

WITH the exception of Todea barbara, a very excellent Fern with several *aliases*, and one which is noted for the peculiarly leathery texture of its fronds, all other Todeas at present in cultivation have finely divided, very fragile fronds of a more or less transparent nature. All Todeas require greenhouse treatment, and all are much benefited by close confinement. Although a few degrees of frost are not hurtful to them, and although such as T. hymenophylloides and superba can stand the effects of severe frost, they certainly do not appear to derive any special benefit from exposure to cold. A compost of peat and silver sand, to which a small portion of partly decomposed Sphagnum may be added with advantage, is that in which Todeas thrive best. The hot dry atmosphere of the summer months is certainly their greatest enemy, and special care and attention are required to keep up a constant supply of humidity in the Todea case. No sun should ever be allowed to shine on Todeas, and condensed moisture is absolutely necessary to their well-being; this, however, should be obtained as much as possible without watering overhead, and if this must be done at any time, rain water only should be used for that purpose.

T. BARBARA, also known in gardens under the names of arborea, africana, rivularis, although also a native of New Zealand, Tasmania, Natal, and Cape Colony, is a plant of totally different habit and structure, and as a decorative Fern has very few equals. It is a robust-growing plant, forming in time trunks of extraordinary thickness in comparison to their height. Its fronds, which are of a leathery texture, dark green, shining and naked on both sides, are produced in great quantities and often measure 3 feet to 4 feet in length; their leaflets are closely set and furnished with narrow pinnules, the edges of which are more or less distinctly toothed. Good-sized plants of this species, which requires greenhouse treatment, but which does not suffer from exposure to the air, can be grown in comparatively small pots, and its lasting qualities are unsurpassed by any other known Fern used for indoor decoration. A mixture of two parts peat and one part loam is that which suits it best, and it delights in having its fleshy roots kept in a constantly moist state.

T. HYMENOPHYLLOIDES, or (as it is called) pellucida, is probably the most robust and the most easily grown of all known species and varieties. It is a native of New Zealand, and produces from a thick, fibrous trunk an abundance of gracefully arching fronds, each frequently measuring 2½ feet in length by 1 foot in breadth. Their leaflets are, or appear to be, dark green in colour, but if a sheet of paper or any other white object is placed at the back of them it is soon apparent that they are of a very transparent nature. This species reproduces itself readily from spores and forms good-sized plants in a comparatively short time.

T. SUPERBA (here illustrated), which is known in gardens as either the Prince of Wales' Feather Fern, or the New Zealand Filmy Fern, and as the Crape Fern in New Zealand, is certainly the most beautiful, as also the most striking, of all the known species. It is also the oldest known Todea, for the specimen in Hooker's herbarium was gathered by Forster in New Zealand during Captain Cook's voyage, although it was not seen again until 1838, when the Rev. W. Colenso (to whom its discovery is generally attributed) detected it on the Tongarou Mountain and three years later on the mountain range near Waikare Lake. Like T. hymenophylloides, T. superba produces its foliage from a somewhat erect, fibrous trunk, which has never been known to attain the dimensions of a stem, as it reaches at the most 18 inches in height and is of a woody nature at the interior and densely fibrous on the outside. Its very handsome fronds, which in its own country frequently measure 4 feet in length, seldom exceed 2½ feet under cultivation; they are from 6 inches to 10 inches broad and finely divided, but are so thickly furnished with leaflets as to appear quite thick and of a dark green colour, although their transparent character is revealed as soon as a white object is placed behind them. This beautiful species is identified at first sight by the character of its fronds, which are furnished with leaflets nearly to their base, showing hardly any stalk, a character which is not shared to that extent by any other species at present known. T. superba can only be propagated from spores, but few are the places where these are known to germinate spontaneously.

T. FRASERI, which is a native of New Caledonia and also of the Blue Mountains, Australia (where it is said to be rare), is the strongest growing and also the least transparent of all the Todeas with finely-divided fronds with which I am acquainted. Its fronds, which under cultivation each attain from 3 feet to 3 feet 6 inches in length and 1 foot 6 inches in breadth, are borne upon stalks which when young are of a light red colour, forming a very pleasing contrast with the bright light green colour of their leafy portion. These (as in the foregoing species) are produced from a fibrous trunk, which sometimes measures 1½ feet in height, but which has never been known to assume the dimensions of a stem. It also reproduces itself freely from spores, which are produced in abundance.

T. MOOREI, of comparatively recent introduction, is a beautiful plant. Native of Lord Howe's Island, and so very similar to T. grandipinnula of Moore, that it is difficult to distinguish one from the other. The trunks, which at various times have been imported into this country, do not show the fibrous character peculiar to those of the foregoing species; they are of a more woody nature and furnished with fewer roots. The fronds, which are large and massive, are delightfully transparent; their leaflets being larger than those of other species show this character to great advantage. It has not been ascertained yet whether this species will reproduce itself or not from spores.



Todea superba. From a photograph by Miss Willmott, Warley Place, Essex.

The list of known species of Todeas with transparent foliage is brought to a close with the lovely

T. WILKESIANA, which Mr. Baker classes as a mere variety of T. Fraseri. From a botanist's point of view this may be correct, but for all garden purposes the two plants are sufficiently distinct to be kept apart. In the first instance, while the foliage of T. Fraseri is hardly transparent, that of Wilkesiana is decidedly so; then the fronds of T. Fraseri are produced from a

trunk or clump of a fibrous nature, having much the appearance of that of an Osmunda, whereas those of T. Wilkesiana, which is a native of Fiji and the New Hebrides, having been first discovered by a botanist attached to the United States Exploring Expedition in Ovolau, one of the Fiji Islands, are produced from a decided stem and form a miniature Tree Fern. This stem is of a slender nature, being seldom more than 1½ inches in diameter, although it reaches 2 feet in height, and the fronds, which attain 2 feet in length, are about 16 inches wide at their broadest part. This species also reproduces itself true from spores.

To the above may be added several very handsome varieties, all of which were raised in Messrs. James Veitch and Sons' nurseries. In

T. INTERMEDIA we have a robust-growing and beautiful form which, as may be gathered from a note in Hooker's "Synopsis Filicum," p. 428, also seems to have made its appearance spontaneously in New Zealand. It is intermediate between T. superba and hymenophylloides, agreeing with the latter in the cutting of the leaflets, but the shape of the fronds is much more that of superba, the stalks being densely covered with short woolly hairs.

T. PLUMOSA is a very pretty form of compact, dwarf habit, and of a pale green colour when young. It somewhat reminds one of Todea intermedia, but the fronds, which are shorter and more egg-shaped than those of that variety, are borne on stalks which are also wanting in the woolly nature which is peculiar to that plant. It is singular that a considerable number of plants of identical character, but differing from the supposed parent, were then obtained from one sowing of T. superba. These can only be supposed to be accidental hybrids, brought into existence by the casual intermixture of spores of some other Todea with those which were purposely sown. I am further inclined to believe in this theory on account of the barren character of these mules, which, though producing great quantities of spore cases, have never been known to have produced any possessing germinating powers, so that this form is getting gradually exhausted. The same remarks respecting the raising at one time of a quantity of seedlings of identical character and proving barren afterwards apply with equal force to the most beautiful of all home-raised hybrids or varieties,

T. GRANDIPINNULA. A most remarkable plant, as much on account of its production as on account of its distinct appearance and of the great beauty of its handsome massive fronds, which are undoubtedly the most transparent of the whole genus. As it has been stated previously, it is so very similar to T. Moorei of Baker, that I consider the reproduction of Thomas Moore's description of the plant and the comments he published when it first made its appearance especially interesting at this juncture. Although raised several years before, it was not until 1886 that this lovely plant was put into commerce. In the *Gardeners' Chronicle* of June 12 of that year, p. 752, Moore says:—

> This handsome Fern sprang up in one of Messrs. James Veitch and Sons' houses, under conditions that render it probable it may be of hybrid origin; in fact, it originated in the close neighbourhood of T. Fraseri, which had been standing in company with T. hymenophylloides, and several other distinct forms were noticed among the batch of seedlings which sprang up in this position, most of them being of a semi-depauperated character. The present, however, proved to be from the first a fast grower, with a singularly leafy development, which gives to it an aspect quite unlike that of any other known species or variety of this remarkable genus. The obvious and characteristic peculiarity of the plant is the broad leafy aspect of the fronds, in which both pinnæ and pinnules are very much overlapped at the edge in consequence of their free growth, both of them being broad, egg-shaped in form, and unequal in development, so that both fronds and pinnæ are irregular and unsymmetrical in outline. Whether it be regarded as a hybrid form, with the parentage above suggested, or whether it is simply a foliose sport from T. hymenophylloides, which may possibly be the case, it is a novelty for the Fern house, and one deserving the full appreciation of the cultivator.

To the foregoing remarks I may add that under good culture and the special care of Dr. J. N. Winter, of Montpelier Road, Brighton, the fronds of this lovely plant have attained considerably larger dimensions, and it is also a great pleasure to know that, though exposed to the effects of frost during last winter, Dr. Winter's magnificent plants of T. grandipinnula have not suffered in the least from it.

Several other varieties, presumably issue from T. hymenophylloides, Fraseri and Wilkesiana, have also been raised at the Chelsea nurseries and grown there into goodly-sized plants. The group of eighteen thoroughly distinct forms exhibited by Messrs. J. Veitch and Sons at the great Fern conference held at Chiswick in 1890 was intended to show the predisposition to variation possessed by the subjects raised from spores, and in that respect it stood as a unique feature, for some of the plants showed very strange departures indeed, some being depauperated, while others had all their pinnæ terminated by a tail-like process. Others, again, had their fronds normal in size and shape, but their pinnæ were bitten off, and the most noticeable character in the majority of cases was in the nature of the stems, which were mostly of the Wilkesiana type, clear and slender. These have never been either named or described, because, although they produce great quantities of apparently fertile spores, none of them possess the power of reproducing themselves, and as it is the only mode of propagation possible with Todeas, these various and distinct forms cannot be increased.

S. G.

THE ROCK GARDEN.

XIV.

AUGUST 15.—Genial sunshine has come again after many rainy days, and though many of the rock garden plants suffered from the wet, the change in the weather has favoured the development of a fresh supply of hardy flowers.

DWARF ROCK PLANTS FLOWERING EARLY IN AUGUST.

One of the prettiest little rock plants now blooming is Acæna microphylla. It seems to grow anywhere without trouble, and makes an effective fringe for rocky steps or a neat carpet for stony banks where it can spread out its prostrate shoots covered with tiny bronze leaves and display its globular heads of crimson spines. Androsace Leichtlini with its crimson-eyed white flowers seems to last in bloom even longer than its beautiful parent, Androsace lanuginosa, and both certainly go extremely well together. Alyssum spinosum is a valuable rock plant. Most of its congeners flower in spring only, but this variety is ornamental all the year round, and even at midwinter its compact habit and tiny silvery leaves are decidedly effective, while now the charm is enhanced by numerous white flowers. An excellent blue flower is the late-flowering Forget-me-not (Myosotis Welwitschi), of which I noticed a good plant still in full bloom in early August on a rockwork in Sussex; it has very slender trailing shoots, which, like the leaves, are covered with minute hairs. The flowers are azure-blue and very effective. In the same rock garden I saw Pelargonium Endlicherianum, which has showy deep rose-coloured flowers and plicate reniform leaves each from 2 inches to 2½ inches in diameter. This is the only Pelargonium which is hardy out of doors. The plant which came under my notice is about a foot in height and very effective. Convolvulus mauritanicus is now flowering in Essex, Sussex, and in the west, and its bright blue flowers are a great ornament, especially where the plant is treated as it should be, *i.e.*, planted on an elevated position where its pendent shoots can droop over large stones. Scabiosa Parnassi, with its silvery grey leaves and light pink flowers, makes a good companion to the former. It will grow almost anywhere, but is never so effective as when planted on sloping ground in the full sun. That noble yellow Rockfoil, Saxifraga Hirculus, has finished blooming in most places in the west, but in the eastern counties I noticed several plants flowering to perfection in moist half-shady places, especially in Sussex and Surrey. Of dwarf Campanulas blooming early in August—or perhaps, more correctly speaking, still in bloom—I may mention Campanula pelviformis, C. rotundifolia, C. Hosti, C. H. alba, C. rhomboidea alba, C. isophylla, C. isophylla alba, C. Zoysi and C. excisa. C. isophylla of course looks best hanging down over stones. C. Zoysi suffered much last season, probably more from the rains in autumn than from the severe cold. In several places in Devon it has been killed altogether, but I noticed a fine batch early this month in a rock garden in Essex, where it was growing in very light soil and sheltered by a large projecting ledge of rock. It has erect stems about 5 inches high, each bearing several bell-shaped pale blue flowers of very distinct appearance. C. excisa is still flowering at Kew. It has been very appropriately named, for its corolla is so deeply cut as to have an almost artificial appearance. Silene armeria sows itself when once established, and very showy are its bright crimson blooms, enlivening the rocks at a time when bright flowers generally are beginning to get scarce. It makes a capital contrast of colour with the bright yellow Inula ensifolia, which is very dwarf and bears large showy flowers. Linaria anticaria is now blooming abundantly for a second time, and its white, dark spotted flowers associate well with the purple Linaria alpina, which is also still in bloom. Useful carpeting plants for a bog bed or other low damp place are Pratia angulata, Lysimachia nummularia aurea, and Erodium Reichardi, all of which are now in bloom. Pratia angulata also goes by the name of Lobelia littoralis, and its white flowers resting on a dense carpet of tiny green leaves are very attractive. Erodium Reichardi also has small leaves and white flowers, but it spreads but very slowly, while the golden Lysimachia, which has yellow leaves as well as yellow flowers, expands rather rapidly. An Erodium suitable for a drier position on more elevated ground is Erodium supracinereum, with Fern-like divided silvery leaves and drooping pink flowers. One of the latest flowering Dianthuses is the variety now blooming at Kew under the name of Dianthus versicolor (Russia); it has a semi-prostrate habit, and its magenta-crimson flowers are further enhanced by a dark ring in the centre. Here I must also mention Dianthus Atkinsoni, although it can hardly be called a dwarf rock plant. I noticed a beautiful plant of this variety early this month in a Sussex garden. The erect flower-stems are 18 inches high and bear numerous flowers of the most brilliant blood-red colour, and quite the size of a florin. The petals are serrated at the outer edge and are as broad as they are long. It is a great pity that such a lovely plant should be so scarce and so difficult to obtain.

In conclusion, I would mention among dwarf rock plants for early August the pretty little Hypericum nummularifolium, with almost

Cotoneaster-like foliage and handsome yellow flowers; the native Frankenia lævis, which forms an excellent little cushion studded with small pink flowers; Wulfenia carinthiaca, which has large leaves and purplish blue flowers; and Trachelium rumelicum, with light blue flowers.

Medium-sized and Tall Rock Plants Flowering Early in August.

Plants of medium size do not seem to flower abundantly just now, and among those which have come under my observation I will mention only the following: Spiræa filipendula fl.-pl., Sedum populifolium, Erigeron alpinus, Dietes Huttoni, Zauschneria californica, Ononis rotundifolia, Caltha leptosepala, and Geranium Wallichianum. The Spiræa mentioned is too well known to need any further comment. Sedum populifolium is a decided acquisition on account of its being so very unlike any other Sedum. Its pale pink flowers are set off by peculiarly shaped, Poplar-like leaves, and it makes an effective plant for a prominent position on high rocks. The yellow Iris-like flowers of Dietes Huttoni form a good contrast to the mauve-purple blooms of Erigeron alpinus or to Ononis rotundifolia, with leaves resembling those of Birch and bright crimson flowers. In a damp swampy place the white Marsh Marigold (Caltha leptosepala) is now at its best, while in positions that are dry and sunny few plants do better than the blue Geranium Wallichianum and the brilliant scarlet Zauschneria californica. The latter requires plenty of room and must be kept quite separate from rocks on which small alpines are growing.

Of tall plants for background work or for forming a kind of connecting link between the rock garden and the shrubbery, the following are now in bloom: Chelone barbata, scarlet; Galega officinalis, lilac; G. o. alba, pure white, and Gypsophila acutifolia. The last, by the way, has its white flowers thinly scattered in large panicles growing 5 feet high, and is an excellent plant for cutting and mixing with flowers for home decoration, for which it is still better adapted than the well-known G. paniculata. I will also mention Rudbeckia purpurea, purple; R. Newmani, bright yellow; Helenium striatum, brown, with yellow stripe; Inula bifrons, yellow; Eryngiums of sorts, blue; Onopordon acanthium, purple; Cichorium Intybus, blue; Digitalis grandiflora, yellow; and Campanula bononiensis alba, white.

Exeter. F. W. Meyer.

(To be continued.)

Orchids.

DURATION OF ORCHID FLOWERS.

There are a few Orchids, such as Stanhopeas and several others, the flowers of which are very fleeting, but the majority of the family are among the most durable and long-lived of any plants. Take the Cymbidium, for instance. It is not uncommon for the flowers of C. Lowianum to keep fresh for three months, while those of Cypripediums last a very long time if not bruised or wetted or fertilised either by insects or artificially. It is in only too many places the rule to allow the flowers to remain on the plants too long, and although advised to the contrary, many amateurs and others still persist in this. It is needless to dwell upon the harm done to the plants by this over-flowering, for not only has it been often decried by writers in The Garden, but it is easy for anyone who observes the plants to see the mischief for himself. A frequent query is, how long should the flowers remain on such a plant? and perhaps an Oncidium or Odontoglossum is indicated. In conversation recently with a successful amateur cultivator this subject cropped up, and he complained that while writers advised cutting the flowers sooner than is usually done, they gave no hint as to how long the various species may carry their blossoms with impunity. There is perhaps some truth in this, but the fact must not be lost sight of that here is a capital opening for the old adage, that circumstances alter cases. In order to say how long a plant may safely flower it will be necessary to consider first of all the health of the individual plant, the atmospheric conditions of the house it is blooming in, and the relative number of flowers it is carrying in proportion to the size of the pseudo-bulb. Frequently semi-established plants or those in about their second season's growth throw up large vigorous spikes. The plants have perhaps been well treated, grown in a moist and well-considered atmosphere up to the time the flowers are opening, when they are taken to a dry flowering house or living room. The drying atmosphere combined with the heavy strain of flowering while yet the plant has only a few roots will soon be apparent, and the spikes cannot with safety be left upon such a plant, say, of Oncidium tigrinum for a week or ten days. On the other hand, supposing the plant had been well established in its pot and the house in which it was blooming kept slightly moist no harm would accrue if the flowers remained for twice that length of time. Plants that are weak and debilitated from whatever cause ought not to be allowed to carry many flowers or for any length of time. There are many species that, if in fairly good health, may always carry their blossoms until they fade provided they are large or medium-sized specimens of their respective kinds. The labiata group of Cattleyas may be noted as instances of this, few if any of them carrying their blossoms long enough to do any harm. The flowers of Cypripedium, on the other hand, unless the plants are exceptionally strong, should usually be cut after they have been open a month. This need not be taken as applying to the ordinary varieties of C. insigne, C. villosum, or similar kinds, but to those that one is more particular about and all valuable or rare kinds. The blossoms last nearly as long in water, though they lose some of their colour. The beautiful little C. Schlimi is often weakened by its continuous flowering, though this is not owing to the time the individual blossoms last, but the number that are successively produced. The pale yellow tinge in the foliage of plants that have been long in flower is indicative of the waste that is going on to maintain the numbers of blossoms that everyone admires, and it is really surprising how quickly this gives place to a healthy green hue when the spikes are removed and the plants well watered. The flowers of Cymbidiums, as mentioned above, last a long time. Although they are large and fleshy, I have never known any harm done by leaving them on provided the roots are kept supplied with water and the atmosphere right. The majority of Dendrobium flowers, again, may be left until they fade, the pseudo-bulbs being fully able to stand the strain. There may be instances where it would not be advisable, but as a rule it is quite safe. Perhaps the most easily injured of all Orchids are the crispum, Forbesi, and Marshallianum types of Oncidium. Take any of these and compare the size of the spikes and quality of flowers with the pseudo-bulbs that have to sustain them, and the reason is at once apparent. Not only this, but they are usually weakly-rooting subjects, and can therefore only be allowed a modicum of compost in comparison with the Orchids noted above. From ten days for weak plants to a fortnight for stronger ones is long enough to leave the flowers on, and when one considers the advantage it is to the plants, there need be no compunction felt as to this, for have we not the thought of next year's flowering to console us for the shortening of this season's display. Many others may be mentioned, but as the repetition of names becomes somewhat tedious, perhaps these will be best referred to when treating of the various kinds separately.

H. R.

Odontoglossum cordatum aureum.—There are many varieties of this plant of a mediocre quality, while others are very beautiful. The pretty form mentioned above can certainly be classed among the latter. The sepals and petals are light creamy yellow, becoming very pale towards the tips; the lip is wholly of a pure white. This plant is of very easy culture, thriving under the same conditions as O. maculatum. The compost must be used in a rougher state than for some kinds, and the pots may be rather larger in comparison with the plants. Plenty of water is needed all the year round, and the plants must be kept free of the soft brown scale that frequently attacks them. The type is a very old Orchid, having been introduced as far back as 1837. It is a native of Mexico and Guatemala.—C. H.

Lycaste plana.—All the Lycastes are useful free-flowering plants well adapted for culture by beginners, and L. plana is no exception to the rule. The flowers are somewhat variable in colour, those of the type having light red sepals and pure white petals blotched with crimson. The lip is small with rosy pink spots on a white ground and each flower measures from 3 inches to 4 inches across. The best place for this Orchid is with the Odontoglossums, and I lately saw some fine pieces just throwing up their spikes in a warm greenhouse devoted to Fuchsias, Begonias and the like. It may be potted in two parts of peat fibre to one each of Sphagnum and loam, adding a little charcoal and potsherds. Good drainage is necessary, as the plants require an ample supply of water at all seasons, but especially while growing freely. It is a native of Bolivia and was introduced more than fifty years ago.—R.

VANDA CŒRULEA.

As the earliest plants of this beautiful Orchid begin to flower it is interesting to note the variation in colouring. The size and shape of the blossoms, too, vary, and whatever beauty lies in the starry, narrow-petalled forms, I consider the broad overlapping segments infinitely superior, especially if accompanied with a deep colour. In some of the paler forms the specific name seems misapplied, especially when first open; after they are fully opened a faint blue colour appears, but at first they are nearly pure white. The better forms are of a beautiful sky-blue and are very attractive.

The culture of this Orchid cannot be called difficult, yet several points require careful attention. A free circulation of air, without chilling the plants by cold draughts, is of great importance, and while requiring abundance of atmospheric moisture, the growth will not be satisfactory in the cool or Odontoglossum house. Here the light is too much subdued during the summer months, although if kept at about 50° during winter, or even a little less, the plants will be quite happy at this season. While resting the plants must not be dried at the roots, for these are active much later in the season than those of many other species. Watchfulness is the great secret in growing V. cœrulea.

It is easy to tell at a glance whether or not the plants are happy, and if they do not thrive in one place they must be shifted to another until the most suitable position is found. Here no Orchid gives less trouble; it is grown close to the front ventilator in the Cattleya house, and all through the summer a little air is left on night and day. The plants are only shaded from the brightest sunshine, which would, if allowed to burn the foliage, greatly weaken the plants. If gradually inured to sunlight it is surprising how much of it many Orchids will stand, and this fact is a great argument in favour of early ventilation. If the air is admitted early enough to dissipate the night moisture before the sun shines on the foliage, this will not be so likely to injure it as when the temperature rushes up quickly. V. cœrulea is best grown in pots with perforated sides or in baskets, as the roots delight in copious supplies of fresh air as well as water, which in this form of pot passes away quickly. Clean Sphagnum Moss, lightened by the admixture of charcoal or ballast, will be found a good rooting medium, and the pots may be a little more than half-filled with drainage. During hot weather and when drying winds prevail, frequently damping between the pots and occasionally over the foliage must be resorted to in order to keep up the requisite amount of atmospheric moisture. The Sphagnum must be allowed to grow freely about the base of the plants, as it will indicate with certainty the state of the roots as to moisture. V. cœrulea is an old plant in cultivation, but owing to the number that have been killed by ill-treatment, it has not become so common as many others until within the last few years. Its culture now being better understood, it has become more plentiful. It is a native of the Khasia Hills, whence it was introduced in 1849.

A curious Lady's Slipper.—I herewith send you a flower of Cypripedium barbatum which might interest you. It has only one sepal (situated at the bottom, behind the pouch, instead of at the top), and one petal in the place of the top sepal, both being well developed.—X.

Cypripedium Saundersianum.—This fine plant is amongst the rarest and best of all hybrids. It is a strong-growing plant and the foliage is a good deal like that of C. Schlimi (one of its parents), but larger and more vigorous. The dorsal sepal is white, with stripes of green and purple, the petals wavy, light purple, while the pouch is rounded in front, large, light purple, with deeper spots. It was raised by Mr. Marshall, of Enfield, and first flowered in 1886. Its parents are C. caudatum and C. Schlimi.

Grammatophyllum Rumphianum is now a striking object in the Orchid house at Kew. Two plants of this variety are in bloom, each bearing one very long spike and carrying a mass of flowers. One spike has forty-nine blossoms, and the other forty-seven. The flowers, nearly circular in shape, are each about 2 inches across, and the colour is a chocolate-brown on a greenish yellow ground. A great recommendation of this variety is its comparatively small size. The plants in question are in baskets about 6 inches square and the growths of quite moderate dimensions, so small as to surprise one after seeing the imposing flower-spike.

Miltonia spectabilis Moreliana.—This superb Orchid is now in flower and makes a fine show at this somewhat dull season for Orchids. It closely resembles the type in habit and shape of flower, but in colour is far superior to this grand old Orchid. The flowers are produced singly on the scapes and are each from 3 inches to 4 inches across. The sepals, petals and lip are all deep rich purple, the lip being the lightest in colour, but veined with a deeper tint. The flowers last a long time in perfection. A shady position near the glass in the Cattleya house suits this Orchid well, and it may be grown in shallow wooden baskets or on rafts in a compost consisting of good peat and Moss.

GARDEN FLORA.

PLATE 1030

CYCLAMEN PERSICUM.

(WITH A COLOURED PLATE OF, 1, VULCAN; 2, BUTTERFLY.*)

THE handsome forms of the Persian Cyclamen now in cultivation render it perfectly inexcusable if any growers still cultivate the older kinds with both smaller flowers and paler colours, as well as a less vigorous constitution and proportionately less freedom in flowering. Those now forming the subject of the coloured plate are of the very finest selections in their respective colours. Of Butterfly (white) it may be safely stated that no finer pure white variety has yet been placed in commerce, whilst in the form of the flowers, with the broad overlapping petals and great profusion of bloom, it is unsurpassed. The flowers are borne upon stout foot-stalks, which need no support when due care is taken to prevent them drawing up too slender. The foliage alone of this particular variety is a picture in itself, with its beautifully marbled venations and blotches. It is, in fact, the ideal of a pure white Cyclamen. Vulcan, on the other hand, forms quite a contrast in point of colour, being of an intensely deep crimson, with more of a maroon tint with age. This variety also has the other good qualities of the preceding, with less distinctive, but none the less beautiful, markings in the foliage. Under artificial light its colour is very rich, making it a most valuable plant for all indoor purposes throughout the Cyclamen season. I never remember to have seen this particular shade of colour so intensified in any other variety. It is important to note that these beautiful forms are both reproduced perfectly true from seed. These, with other remarkably fine varieties (including the giant forms), may be seen in admirable condition at Messrs. Sutton and Sons' nurseries, Reading. The mode of culture there adopted will be found at page 379 of the last volume of THE GARDEN, June 1, 1895.

Another well-known grower—Mr. W. Warren, Worton Gardens, Isleworth—sows the seed the first week in June in pans 1 foot square, with plenty of crocks for drainage. The pans are then placed in a one-pipe pit, which is covered with mats to keep it dark and kept at a temperature of about 75° Fahr. The pans are daily looked over to see that the soil does not become dry, as is often the case at the sides. In about six weeks the young plants appear; the pans are then taken to a greenhouse and placed as near the glass as possible, damped morning and evening and shaded from the sun. These few hints are taken from a paper read by Mr. Warren before the R.H.S., January 13, 1891, and published in the journal of the society. Full details of culture are therein given.

The fact of Mr. Warren sowing the seed as early as June should not on any account deter growers from at once proceeding to do the same. Many do in fact prefer to sow in September and October. Cyclamen seed is always offered in the spring seed catalogues, but on the other hand it is not always made so prominent a feature in the autumnal bulb catalogues, wherein its appearance is certainly most desirable, more so in fact than in the former. The seed if sown, say, during January, February or March, has not the same favourable conditions in its favour as regards germination; other things then press for immediate attention as well. If the same seed be left until the following June, or later, it is then a year too old, hence the greater desirability of purchasing as soon as possible after it is ripe. This item of culture should be noted more particularly by private growers, who often fail to grow this handsome flowering plant so well as the market men. H. G.

* Drawn for THE GARDEN by H. G. Moon at Messrs. Sutton's, Reading, March 1, 1895. Lithographed and printed by Guillaume Severeyns.

THE WEEK'S WORK.

FRUIT HOUSES.

PINES.—Fruits ripening fast or required for a special date may be retarded, without loss of flavour, by removing the plants to a cooler and more airy house, keeping them drier at the roots and allowing a free circulation of warmth in the pipes. The fruit will not shrivel and will be much better treated thus than when cut and hung up. If it is desirable to keep them for a considerable time it is well to remove them when fully ripe to a cool fruit room or a vinery, giving full air front and back and placing the plants under the shade of the Vines. Houses as they become vacant should if possible at this season have any necessary repairs made good, as it is an easy matter to place the old stools in makeshift places whilst the work is in progress. It is well to limewash the walls and wash all paint and glass. The beds, when allowed to remain a long time, are often much infested with woodlice, and at this season of the year it is well to clear out old spent material and refill with new, and before putting in the new to give all walls a thorough scrubbing with hot water. Mealy bug is a terrible pest, and it often would be best to sacrifice the plants. Late fruiters started a few weeks ago should now be growing freely, and if given a liberal temperature will take food in the way of weak guano water or liquid manure. The temperature should not fall below 70° at night, and should run up to 95° at midday or closing time, well syringing all parts of the house, beds and bare places. In dull weather raise the temperature early in the day, allowing it to decline by nightfall. Plants which promise well may be top-dressed if the pots are small, using bone-meal freely. It is necessary with plants treated thus to see that the old ball of soil does not get too dry after the new soil is added.

GENERAL STOCK.—With shortening days the succession Pines will need less heat, but it must be a gradual reduction, and any likely fruiters of the Cayenne or Rothschild section should not be kept with what are termed next year's fruiters. Very little shade will now be required, and to get the full benefit of sun heat so necessary for the plants the glass should be cleansed and all traces of permanent shading removed. Any plants potted late should be given a light dewing overhead in bright weather and be kept a little warmer than well-rooted plants. From this date less water will be needed at the roots, and though it is important to keep the plants as vigorous as possible, they should not be drawn or hard forced, and in fine weather the syringe may be plied freely between the plants, damping the walls and floors, as with a genial temperature the moisture will quickly dry up. The bottom-heat should be regular, and be kept as near 85° as possible, the minimum being 5° lower. The atmospheric temperature may range from 70° to 80° according to the weather, 10° lower being a safe night temperature, closing early in the afternoon. When watering is necessary, it should be done early in the day and thoroughly.

SMALL PINES AND SUCKERS.—The earliest strong suckers of the Queen section taken from early fruiters will now be well rooted, and may be removed to the general stock or succession house,

and thus get more liberal treatment. By removing these, room will be found for later batches, and as at this date there will be strong suckers of the late fruiters, no time should be lost in potting up into 7-inch or 8-inch pots, using a size smaller for later or smaller plants. Give these the compost advised in previous calendars, pot firmly, and plunge in a bottom-heat of 90°, keeping close and giving just enough water to keep the soil moist. One good watering at the start will usually do for some time, and as they root freely give more moisture and air freely in bright weather to keep the plants sturdy. When plunging in the beds care must be taken not to loosen the plants at the collar and to see that the heat does not rise too rapidly. Shading for a short time daily may be necessary till roots are made, and at closing, which should be early, a genial temperature may be obtained by damping dry parts of the house and covering the glass at night to prevent hard firing.

Bananas.—Plants with fruits well advanced cannot be fed too much as long as the plants continue to grow freely and the fruits to swell. A good top-dressing of guano or fish manure will greatly assist the fruits, and when watering give liquid manure. Bananas, being gross feeders, will take stronger food than other fruits, and at almost every watering when the fingers are well formed. Plants just showing fruit will need more than usual care at this season, as if there is too much moisture overhead the fruits decay instead of swell. A drier atmosphere is necessary at the time named. Fruits which set in the late autumn should not be grown in a high temperature, 65° to 70° during the day being ample and 60° at night. If grown quiet through the winter an increase may be given early next spring, and there will be finer fruits of superior flavour. Plants finishing their fruits should be kept dry. If the fruits be nearly ripe, the bunches may be cut and hung up in a dry, warm house, where they will ripen as required. The strongest suckers should be detached from the plants from which the fruits have been cut and placed on one side, and the old soil and plants should be taken out. Much better results are obtained with fresh soil. Sound loam in a rough state, with such aids as bone-meal and decayed manure, should be employed, with ample drainage, planting firmly and not too deeply, as the Banana is mostly dependent upon surface roots. Suckers not required for planting should be potted up and placed near the light. For free cropping I have found no variety equal to Musa Cavendishi. Plants in tubs or large pots will take large supplies of food and moisture if fully grown. It is well with plants perfecting their fruits, to reduce the number of suckers and give a genial temperature, ripe Bananas in October or later being appreciated. Large plants that have failed to fruit should now be kept quiet, as fruiting will be better deferred till early in the year.

Cherries under glass.—The trees should not be forgotten no matter how grown. During heavy rain it is a good plan to empty the tanks on the inside borders. This will assist the trees to plump up the buds. The roots should never suffer from dryness and the leaves be kept as healthy as possible till they fall. With trees in cases not forced there will be later growth. Such trees will well repay liberal supplies of food in the way of liquid manure. Should red spider be troublesome take early means to get rid of the pest by placing a little sulphur in the water when syringing, thoroughly washing all parts of the trees. For black-fly, which often attacks the points, either dip the shoots or syringe with tobacco water. The trees should get free exposure, the ventilators being open day and night. Should the trees be at all gross, omit food, but do not spare moisture. The trees may be prevented growing too freely by root-pruning, and I do not think there is any time better than the present for this work. In root-pruning it is well to proceed cautiously with large or old trees and not to attempt to lift, merely shortening the strong thick roots, carefully preserving all fibrous roots, spreading these out nearer the surface and giving new soil, such as fibrous loam, to which have been added some wood ashes and old mortar rubble if the soil is at all stiff or clayey. Young gross trees should now be lifted. It may also be necessary to replant nearer the surface. With young trees it is well not to give rich food, using pure loam with the additions advised for older trees, thoroughly watering after replanting, and in bright days damping overhead several times daily to prevent the foliage from flagging, also shading for a short time daily if necessary. In lifting young trees endeavour to get a large ball and well saturate with water if the roots are dry.

G. Wythes.

THE KITCHEN GARDEN.

Late Vegetable Marrows.—Although we do not expect sharp frosts at present, the careful cultivator must be on the alert, as for several nights past the thermometer has run down very low. Those who value a late supply of Marrows will do well to provide a temporary shelter for late planted beds. A rough framework answers best, as then it is an easy matter to throw mats or canvas over it if deemed necessary. It is astonishing how late Marrows, that have not been impoverished by over-cropping during the summer months, will continue to yield fruit if well mulched and assisted with liquid manure. Where the advice given to raise a late batch of plants was acted upon, they will only now be coming into free bearing, and certainly such are well worth a little extra labour in the way of protection from frost. Where a special lot of plants was not raised for late fruiting, several of the healthiest and most promising of the ordinary summer fruiters may be freely thinned out, all old straggling main growths being cut well back—this process allowing of another good mulch of rotten manure being applied. Plants so treated will grow away again vigorously and afford many good tender Marrows when the ordinary ones are giving up. Fruits that have been saved for seed should now be detached from the parent plants, and either laid on latticed shelves or suspended in a dry warm vinery at rest for a time to thoroughly mature them. The same may be said of fruit intended for use in pies during winter or for mixing with Apples in tarts, as the practice is in some counties.

Forwarding outdoor Tomatoes.—Batches of plants bearing fruit in a very small state should henceforth be watered with clear water only, applications of liquid manure tending to promote growth rather than to hasten on the fruit. Where any old spare lights from pits or frames are at hand, these may with advantage be placed in a slanting position against the wall in order to hasten on the fruit. Keep all lateral growths closely pinched, and thin out, in strict moderation, the old leaves where crowded. Of course where these lights are used no rain can reach the roots, so that attention must be paid to regular artificial supplies, especially if the plants are in pots plunged in the border.

Turnips—last sowing.—The first sowing of Chirk Castle or Orange Jelly, if made as advised, will now be fit for thinning. Allow ample room for each bulb, a free circulation of air being absolutely necessary for Turnips that are to stand the winter. Crowded plants invariably have flabby foliage, which gets badly punished by severe frosts. A second and final sowing of Chirk Castle may now be made; this will not only afford good useful bulbs during January and February, but a supply of tender green tops as well, these being much esteemed in the dining-room for a change. If, when the young plants appear above ground, slugs should be troublesome, as they frequently are among late-sown crops, dust well with soot and lime, adding also a little guano to act as a stimulant.

Winter Carrots.—Sometimes on strong, wet soils Carrots intended for drawing in a small state during winter suffer much from the attacks of slugs and grubs. This difficulty can be surmounted by sowing in a spare frame in a sheltered spot and in light friable soil. The roots can then be covered in sharp weather with Bracken or strawy litter. All second early sowings of the Horn section may now be lifted and stored in sand or soil in a dark, cool place or even laid in in the open; this will give an opportunity of well dressing the plot from which they have been lifted with gas-lime, as there are few gardens in which Carrots are not more or less affected with wireworm.

Cabbages.—Those who have sufficient ground to risk extra early sowings will now have plants large enough for putting out on permanent quarters. I have all through the season urged the importance of early preparation of all plots intended for either Cabbage or the Brassica tribe, a firm root-run being such a great advantage. However, where this cannot be done, manuring and digging must now take place. I do not advise the use of solid spit manure, rather preferring that in a somewhat shorter condition, but well saturated with the urine. This decays more gradually, much of its strength remaining to benefit the roots in spring, when active growth commences. On no account plant on ground lately occupied with Cauliflowers, or clubbing and a host of other evils, not the least being attacks from the small Cauliflower mite, may follow. A little fresh lime spread over the surface and dug in with the manure, also a little soot, will not only stimulate growth, but also go far to eradicate the greatest enemy of newly autumn-planted green crops—the underground grub. If these early Cabbages were pricked off from the seed beds on to spare plots as soon as large enough to handle, they will lift well with a good ball of earth, especially if a good soaking with water is given through a rose the day before. This should always be practised after a dry period, or no matter how carefully the work is performed the bulk of the soil will fall, tearing off many of the best rootlets with it. Plant with a trowel, and allow a distance of 2 feet between the rows and 18 inches from plant to plant; leave a shallow basin round each, and water home. If time can be spared the best way is to draw drills, watering these well over-night and planting the following morning. Sink the plants well in the ground to prevent swaying to and fro in windy weather. The plants from seed sown about August 20 will now be ready for thinning. Let this be done with a free hand, making those firm to secure better rooting. When large enough I would recommend the pricking-off system even with these successional lots.

Michaelmas Cabbage.—This is a term applied to plants grown in some counties for hearting in towards the end of September. Secondary plantings from the same seed bed result in useful white heads in October and November, these having a most delicious flavour after receiving one or two moderate frosts. These should now get several good waterings with farmyard liquid, no matter how copious the rains may have been, as at this middle-growth stage the roots draw much nourishment from the soil and need much moisture. Stir by means of the Dutch hoe all vacant places between the rows, not only to kill weeds, but to admit sun and air. If any old summer Cabbages are growing near them and are infested with fly, they should either be done away with altogether or cut right back, or the probability is the above-named lot will also become affected.

Cleaning and moulding.—The Dutch hoe should now be put through all growing crops for the last time, as frequent showers have lately induced many weeds to spring up; moreover, if this is neglected at this season they sometimes in the case of a mild winter grow on and seed, leaving an unwelcome legacy for the spring. In exposed gardens the moulding up of any late-planted winter and spring crops, especially Broccoli, must be attended to, as, independent of its steadying the stems, the soil protects the stems from frost. Where procurable, a good quantity of Bracken should be cut in a green state, and when by occasional turnings it has become well seasoned, carted home and stacked. This is in-

valuable during winter for the protection of root crops, Celery ridges, covering frames containing Endive, Lettuce, or other half-hardy subjects, and for mulching fruit trees in early summer.

J. CRAWFORD.

FRUIT AND VEGETABLE CROPS.

SOUTHERN.

The Gardens, Hungerford Park, Berks.—In this garden and the neighbourhood I find that Apples are rather scarce, about a third of a crop, the summer and autumn of 1894 not having been favourable for ripening the wood. We have a good crop of Peaches on the walls, also Apricots and Nectarines, which were not protected in any way. As for Plums, we have far too many, especially on the Victorias, and any amount of small fruit, most of it very fine. I consider this district very favourable for fruit growing of all kinds, particularly stone fruit, the soil being a fine sandy loam, resting on chalk, but rather strong.

The late severe winter destroyed all the vegetable crops, though the garden is sheltered by tall trees, and the very dry season just past has made it extremely difficult to keep up the required supply.—J. MORRIS.

Holly Lodge, Highgate.—Apples abundant, but small. In my opinion the trees have suffered more from red spider on the foliage than from drought at the roots. Pears an average crop, they having withstood the drought better than the Apples, the foliage clean. Plums a very heavy crop and looking well on the whole. Green Gages very plentiful. Bush fruit below the average, except Black Currants, which have been plentiful, but small. Raspberries good both in quality and quantity, Superlative taking the lead. Strawberries abundant and good with the exception of those attacked with mildew, which has been more prevalent this year than I ever knew. Peaches and Nectarines average crop and trees healthy. Morello Cherries plentiful, but small, having been affected by the dry season.

The severe winter was most destructive to shrubs and vegetables, but not much perceptible damage has been done to fruit trees.—J. WILLARD.

Arundel Castle, Sussex.—Apples average crop. Lord Suffield, Lane's Prince Albert, Cox's Orange Pippin, Cox's Pomona, Mr. Gladstone, Stirling Castle, Northern Dumpling, Cellini Pippin, and Keswick Codlin are carrying heavy crops. Trees are very clean. Pears under average. Pitmaston Duchess, Beurré Bosc, and Marie Louise are carrying best crops. Plums average on walls. Green Gage, Imperial Gage, Orleans, Kirke's, Victoria, and Royal Dauphin are carrying good crops. Apricots, Peaches, and Nectarines average crops, trees healthy and fruit colouring well. Cherries, both sweet and Morello, average, quality very good. Strawberries over average, but fruit small. Raspberries abundant, but canes suffered from the severe frost. Gooseberries under average. Currants, Medlars, Filberts, and Walnuts good crops.

First and second early Potatoes are yielding medium crops of good quality; late kinds are growing out since the rain came. Peas, Beans, and all Brassicas have to be constantly watered to keep them going. From April 1 to July 17 we had 4¼ inches of rain, from July 18 to 30 we have had 3¾ inches.—E. BURBURY.

Betteshanger, Dover.—Although such a dry season nothing seems to have suffered. Shrubs looked badly cut up for a time, but have now quite recovered. Roses did not suffer so much as might have been expected. Though late in breaking, they bloomed well. All kinds of bush fruits are very plentiful. Pears and Apples plentiful. Peaches and Nectarines good. Plums and Damsons scarce. Figs, very much cut at first and very late in coming into leaf, are now showing a lot of fruit, so that if we get a good August there will be plenty of fruit.

All vegetable crops are looking well. Potatoes are showing no trace of disease. Peas have been good on all trenched ground, especially all the first sowings. I find the recent rains have done the late Pea crop a deal of good.—JOHN SELWAY.

Hillingdon Place, Uxbridge.—After such a wet, sunless summer and autumn as we experienced last year the wood of fruit trees was very imperfectly ripened. Followed by the very severe frost, prospects for this year's crops were anything but bright in the early spring, but after all, comparatively little injury was done to fruit trees. Peaches on a south wall have done remarkably well, setting a prodigious crop so far of excellent quality. Cherries set well. Although many dropped during the stoning period there is still a heavy crop. Apricots, Plums, and Pears are with some exceptions rather below the average. Damsons are a full crop. Apples, on the whole, will be very good, notwithstanding a considerable quantity fell from the trees in a small state owing to the long-continued drought. The heavy rains we have had during the last few days have helped them greatly, and all fruits are now swelling rapidly. Bush fruits are abundant, but small. Strawberries and Raspberries large, plentiful and good. All trees and bushes have been very clean and free from insect pests.—J. GRANDISON.

Fulham Palace, London, S.W.—Apples bloomed well, set well, and grew away very quickly till nearly the end of the dry weather, when they began to fall. The rain came in good time, and since that they are holding on well and are an excellent crop. Pears are also good. Plums, only a few trees here, and on them only an average crop. Peaches a very good crop. Gooseberries and Black Currants an enormous crop, large and good. Strawberries an excellent crop and held out for a very long time.

Potatoes an excellent crop, and although we had no rain from the time of planting till some were fit to dig, the crop was good in every way, Early Puritan being the one for early, The Gentleman, Prodigious and Imperator following; these late ones, owing to the late rain, are very strong and show every appearance of an enormous crop. Tomatoes were all planted out when 18 inches high from 9-inch pots. By so doing they had a good start. They have been setting the fruit from the time they were planted out, and now the first set fruit is daily ripening and of good size and quality.—A. J. BALLHATCHET.

Hume Towers, Bournemouth.—I have had a very good crop of small fruits. Black and Red Currants I never had finer. I have a good crop of some sorts of Apples, such as Lord Suffield, Manks Codlin, King of the Pippins and American Mother. Pears are very scarce; there was a good set, but nearly all fell from the want of moisture to swell them off. I have noticed the same thing other years when dry at that season.

The vegetable crop has been very poor. Peas only half a crop. Cabbage and other things very small. I have not had a good Cauliflower this season, but there is a vast improvement in everything since we got rain. The severe winter did not do so much damage about here, as in other places with the exception of killing a few shrubs.—W. EARP.

Eaglehurst Castle, Fawley, Southampton.—Strawberries were a very good crop and the flavour very good, although the plants had every leaf killed through the very severe winter. The soil here is rather light, but by trenching the ground and well manuring, Strawberries do well. Gooseberries and Currants are also very heavy crops, and, considering the dry weather we have had, the fruit of fair size. Raspberries are a very good crop. The rain we have had has greatly benefited them and the fruit is now swelling well. Apples and Pears are a very heavy crop, but many fruits fell owing to the dry season. Apricots are the finest crop I have seen for many years, the fruit requiring a good deal of thinning. Peaches and Nectarines on the walls are not such a good crop this season. The trees were much affected this season with blistered leaves. Figs do remarkably well here outside in favourable seasons, and I believe we have some of the largest Fig trees in England. Plums are a very good crop both on the walls and on standards. Plums do very well in orchards in this neighbourhood. The soil, generally speaking, is light, but of good depth.

Vegetables are excellent this season, with the exception of Peas, which have been very much blighted.—H. GARRATT.

Woodhatch Lodge, Reigate.—Apples are over average and the fruit promises to be very fine. Pears under average. Raspberries under average, but the fruit is very fine; the frost injured a great many of the strongest canes. Currants (Red and Black) a good crop, the Red an especially fine crop. Gooseberries good crop and all varieties fruiting well. Strawberries promised well, but owing to the drought the crop was a short one. Nuts good crop. Plums under average.

Potatoes are looking well and no signs of disease at present. Root crops are looking well. Onions are free from maggot and swelling well. Peas have done well, Veitch's Main Crop, Stratagem and Webb's Senator being very fine.—C. J. SALTER.

Bulmershe Court, Reading.—Strawberries were very fine. I gave the plants one good watering just as the fruit was changing colour, and that helped them through the dry weather. Apples are rather scarce on garden trees, but there is a better crop on the orchard trees in the neighbourhood. Our garden trees were badly attacked by the Codlin moth, and that I think is the main cause of many failures. Peaches and Nectarines a very good crop, also Apricots. Raspberries very plentiful, but small; Pears a fair crop, Gooseberries and Currants (Red, White and Black) very good, Cherries up to the average, Figs very few, Plums under the average.—T. NASH.

Wildernesse, Sevenoaks.—Judging from present experience and the promise of later crops, the fruit season of 1895 will be one to remember with pleasure, and that after the past severe winter and dry spring. Having a plentiful supply of water, we have been able to preserve our crops, which are now rewarding us liberally. Small fruits are both abundant and of good quality, especially Raspberries, while Strawberries left nothing to be desired, Gunton Park and Lord Suffield being specially fine both in quality and size. Apples are plentiful and promise to be fine. Pears are also good, but Apricots and Plums are under the average.

Potatoes, though small, are plentiful and good, and Peas abundant; the same may be said of other vegetables, proving that where there is no scarcity of water the returns are better from a dry than an over-wet season.—HENRY ELLIOTT.

Cambridge House, Twickenham.—Considering the dry season, our crops here have been good. Apricots a fair average crop. Apples (cooking) very heavy and clean. Pears an average crop. Plums on walls above average, but rather small. Bush fruits abundant, especially Gooseberries. The Plum does very well here on our gravelly soil as an orchard tree, but a rather stiff loam would suit it better.—J. E. BURTON.

Elsenham Hall Gardens.—The fruit crop in general is good. The severe winter does not seem to have hurt the fruit trees. Strawberries looked like producing a very heavy crop, but the season was much too dry. All the other soft fruits were good. Cox's Orange Pippin Apple is bad with me. Last year the trees lost their foliage early from the frost and insects, but now they are making good wood. Pears are fairly good, and Plums are a first-rate crop.—W. PLESTOR.

Basing Park, Alton.—Apples are a good average crop, the fruit large and clean, and two or three weeks earlier. The trees also are clean and have made good growth. Pears much under average and small on standard trees, but on the wall trees a good crop and large. Plums a good

crop. Cherries good, the trees clean and healthy. Peaches and Nectarines good and much earlier. Apricots good crop. Gooseberries thin crop. Currants good, fruit large and clean. Raspberries most abundant crop, fruit small, through so much dry, hot weather. Strawberries almost a failure, through the hot and dry season and frost at night. Nuts most abundant.—Wm. Smythe.

Great Brickhill Manor, Bletchley.—The severe winter through which we passed was anything but detrimental to fruit trees; on the contrary, I have never had better crops. Strawberries coming first into season were far above the average in quantity and quality. I never in all my experience remember seeing such a show of bloom followed by an extraordinary set of fruit. Copious watering during the drought very materially assisted in swelling off an enormous weight of fruit. As to sorts which hold their own, J. Veitch takes the lead; no other variety that I know can approach it for its robust constitution, its never-failing cropping properties, and its noble and handsome appearance combined with good quality. I still grow Keens' Seedling, Laxton's Noble, Cardinal, and several others which are all very good in their way. I have a good opinion of Royal Sovereign, and I think when better known it will take a leading place. Bush fruit, Gooseberries and Currants very heavy crops and excellent in quality, the trees being healthy and perfectly free from blight. Raspberries are not so heavily cropped, but good in quality. Apples far above the average, all sorts being abundantly cropped, while the trees are quite free from blight. Pears are more variable. —G. Bloxham.

Easton Lodge, Dunmow.—Apples here are a good average crop; some kinds are bearing heavy crops, especially Keswick Codlin, Warner's King, Blenheim Orange, King of the Pippins, Cox's Pomona, Nelson Codlin, Lord Suffield, New Hawthornden, Dumelow's Seedling, Irish Peach, Devonshire Quarrenden, Mère de Ménage, Ecklinville Seedling, Lady Henniker, and Manks Codlin. Pears are rather a light crop. Plums are under average; Early Prolific, Victoria, and the Mirabelle are carrying heavy crops. Cherries average crop; Morellos a heavy crop. Peaches and Nectarines of all kinds are good. Apricots poor. Small fruits were an average crop. Raspberry canes were greatly injured last winter by the severe frost. Strawberries were over average, but rather small.—H. Lister.

Yattendon Court.—The past season has been a record one, and for a parallel we must go back to 1854, when the troops were in the Crimea. Winter commenced in real earnest with the new year and lasted till the 12th of March. The winter of 1854 began the first week in February and lasted till April. Most of our green vegetables were destroyed, and for a time our vegetable supplies consisted largely of roots, as Parsnips, Celery, Salsafy, Scozonera, &c. The hardiest green vegetable is the Leek, which never fails in the most severe season. The Spinach lived and did well and I saved some of the spring Cabbage on the old Onion bed, which has, in spite of the season, produced three crops. With the exception of Cauliflowers, our vegetables are good all round. On June 26 we had a splendid rain which saved the crops. We had 1·25 inches fall in an hour. Our Potatoes are good, and at present I have seen no trace of disease, but the present weather is likely to produce it. Apples nearly a failure, Pears very few, Cherries a fair crop, Morellos good on walls. Small fruit, Gooseberries, Currants, Raspberries and Strawberries, of each a good crop. After the very severe winter we passed through, and which lasted so long, I had hoped that the severe weather had destroyed most of the insect pests that affect fruit trees, Apples especially. I am sorry to confess that we have never had a worse visitation of insects on fruit trees, and that in spite of applications in the spring of No. 2 remedy on the leaflet sent out by the Board of Agriculture. I have come to the conclusion that only arsenical compounds are destructive to the enemies of the Apple. I found the above remedy very effectual for the destruction of black fly on Cherries.—R. Maher.

Ottershaw Park, Chertsey.—Apples are a good average crop and the fruits are swelling well since the rain. Pears are much under average. Plums are an average crop on walls, but in the open thin. Cherries have been an average crop both on walls and on standards, and the trees have not suffered from fly this year. Peach and Nectarine trees look very well, the fruit swelling gradually since the rain. Red, white and black Currants, Gooseberries and Raspberries have been a grand crop, fruit large and of good flavour. Strawberries, especially the early kinds, were a grand crop, fruit large and of fine flavour. The late fruit was small from want of rain, and in some places the plants were destroyed.

Vegetables have all suffered more or less from want of rain, but are beginning to look better now. Early Potatoes have been small but the flavour was good. Late ones look very well indeed, and I have not seen a bad tuber this year.—Thos. Osman.

Englefield, Reading.—The fruit crop here, I am happy to say, is very good. Bush fruits, such as Gooseberries and Currants, have been very abundant. Apples are good. Pears good. Plums fair crop. Apricots plentiful. Peaches good. Early Strawberries were good, but late kinds suffered much from the drought.

Vegetables are now looking well, but during the dry weather Peas suffered very much, and a supply could not be kept up. We have no sign of Potato disease yet. Our lowest reading of the thermometer was 3°, which equals 29° frost.—James Coombes.

Bearwood, Wokingham.—The fruit crop here and in this neighbourhood is a good average one. Apples are an immense crop. Pears on wall and standard trees under average. Plums thin in places, more so on walls; some standard trees are carrying very heavy crops. Peaches and Nectarines excellent. Apricots, not grown much in this part, are under average. Bush fruit sufferred much from the great heat and drought, in places fairly good crops. Strawberries the same.

Our early Potatoes turned out good. Later sorts promise well, and are at present free from disease. Most kinds of green vegetables, early and late, are excellent.—James Tegg.

Brookwood Asylum, Woking.—Apples are abundant generally. I have been obliged to prop up the branches. Pears are very thin generally, as the trees were exhausted by the heavy crops of 1894. Plums are very heavy on the trees in the low ground, owing to the rest they got last year through the frost destroying the bloom, but on the high ground, where the yield was so abundant last year, the crop is thin. Bush fruit was plentiful and good, but suffered a little from the drought. Strawberries abundant, but would have been much finer with more moisture. Apricots rather thin. Peaches thin. Nuts a fair crop.—R. Lloyd.

Mentmore, Leighton Buzzard.—Apples an excellent crop on all trees, both in gardens and orchards. The early varieties, such as Mr. Gladstone, Beauty of Bath, Red Quarrenden, &c., have been of very fine quality and highly coloured. The trees are very healthy and have made fine growth considering the dry season. Pears and Plums are also a very heavy crop. Strawberries have been of good quality and a fine crop where the plants were watered. British Queen has been very fine this season, also Waterloo and Laxton's Latest of All. Small fruits have been abundant and of good quality. The past hard winter has done the hardy fruit trees a great amount of good by killing nearly all insect pests. The trees have never been so healthy as they are this year.—J. Smith.

WESTERN.

Badminton Gardens, Chippenham.—The fruit crops in this garden and neighbourhood are, on the whole, very good, Apples especially so, all kinds being well represented. Cox's Orange Pippin is particularly fine and abundant. Pears are not so good as last year. Plums are a good average crop, many of the best sorts requiring thinning. Apricots are very capricious this season, some trees well loaded with fruit, others usually prolific have none; the cause of this is not apparent. Strawberries and bush fruits were very good indeed, especially where liberal and deep cultivation had been given. The frequent recurrence of long periods of drought during the spring and summer necessitates exceptionally generous cultivation if results are to be at all satisfactory. The past severe winter had no harmful effects on fruit trees that I can detect, except in the case of Figs that were unprotected. The Nut crop is a good one, Walnuts especially so.—William Nash.

Trelissick, Truro.—Apples will be a very light crop in this district; the trees blossomed and set abundantly, but weak, so that many of them cast the whole of their fruit early in June—caused no doubt by the severe and continued easterly gales in early spring. Cox's Orange, Mère de Ménage, Stirling Castle, Sturmer and King of Pippins seem to have stood best. Pears are plentiful, but will be very small. Peaches and Nectarines a splendid crop, the trees unusually clean and healthy. This is not a good Cherry neighbourhood, but some of the trees have borne good crops this year, especially May Duke, Black Heart and Governor Wood. Plums are the worst crop I ever remember. There are many extensive Plum orchards in this district, but none of them have more than a tenth part of their usual crop. Bush fruits have been especially fine and abundant. Superlative Raspberry has been grand, and strikes one as being the best all-round variety grown. Strawberries have been very good, especially John Ruskin, Noble and Sir Charles Napier. Medlars and Quinces are very plentiful. The humid climate of west Cornwall does not suit Apricots, and though I grow a few trees I seldom get any ripe fruit.

Vegetable crops are generally very good, especially Peas, where they have been assisted with a little liquid manure. Potatoes are very good both in quantity and quality. I commenced lifting out of doors the second week in June and never had a better lot. Late crops promise well, and so far (July 25) I have not seen any signs of the much-dreaded disease.—W. Sangwin.

The Gardens, Tregothnan, Cornwall.—The fruit crop here is very good, all bush fruits more than average crop, especially Raspberries, Superlative being the chief variety grown, and of this I cannot speak too highly, it being a heavy and a good successional cropper, with large fruit of excellent flavour. Apples in most places are very plentiful. Cherries (Morello) heavy crop. Pears are very scarce; the trees bloomed well, but the fruit did not set well. Plums scarce. Peaches a good crop and trees clean. The syringe had to be used liberally to keep down red spider, which was very troublesome this season. Strawberries suffered very much from drought, so the crop was very light.—Wm. Andrews.

Abberley Hall, Stourport.—There is little to find fault with in the condition of the fruit crops generally in this garden and neighbourhood. The staple soil of Worcestershire is of a sandy loam overlying the old red sandstone formation, although this does not apply to the soil of this garden, it being a cold marly clay on the carboniferous limestone, also being at a high elevation. This possibly may be the reason why the fruits and other crops have not suffered so much from the drought as reported from some other counties. Apples are a splendid crop, this being general. The blossom opened well, and with a remarkable freedom from blight there was no check to the embryo fruit. Pears are a fair average in some gardens, but in others much below. The Pear apparently requires a warmer season than 1894 to perfect the fruit-buds. Last season's crop of Pears was the outcome of the thorough ripening the trees received during the pre-

ceding season, and which as results proved was too hot for Apples. Last season suited the Apple trees admirably, as present crops testify. Plums are a heavy crop and the trees remarkably clean both in the open and against walls. Plum aphis is conspicuous by its absence, and I never had less trouble with the trees than this season. They were washed certainly early in the season as a preventive of insect attacks, as I believe in the old adage "prevention is better than cure." Damsons are about the heaviest crop I ever remember, the trees everywhere breaking down with the weight of fruit. Cherries again are a remarkably fine crop; large quantities are grown hereabouts by farmers for market. Morellos are a very heavy crop and the fruit fine. Our trees are the same year after year, so this season's heavy crop is not the outcome of a light crop the preceding season. Peaches and Nectarines set enormously, and the trees, perfectly clean and healthy, will be sure to swell off fine fruits. Apricots are a light crop, but there was little or no maggot to fight against. The trees in this garden are planted against a wall with a western aspect; consequently the wood was not ripened sufficiently to produce good blossom. Strawberries were the most satisfactory crop I ever remember. The plants are destroyed after the second season. The plants were watered about three times, directing the water into the centre of each plant. No doubt without this watering the plants would have collapsed, as the drought was at its highest at this period. Gooseberries are good, so also are Raspberries as well as Red and Black Currants. The blossom opened strongly and the quality of the fruit is excellent; in fact, I never had it so satisfactory. Walnuts are simply a mass, three to four to a bunch at the end of almost every terminal shoot. The past severe winter evidently did not do the least harm to our fruit trees and bushes; possibly a deal of good, in ensuring the trees having a thorough rest and clearing away aphis.

Excepting Peas, I have no fault to find with vegetables. The drought even on our heavy soil has been too much for Peas, although mulched and watered. The first earlies were very fair, but second crops not so good. Potatoes are very satisfactory, although the first earlies are a light crop on light land. Second earlies are excellent, and main-crop varieties are looking exceptionally well. Onions are looking capitally.—A. YOUNG.

Rood Ashton, Trowbridge.—On the whole fruit crops here are very good, especially taking into account the unfavourable nature of the season. Apples are a heavy crop, and require in some cases a severe thinning. This is particularly noteworthy in Lord Suffield, Lord Grosvenor, Stirling Castle, Ecklinville Seedling, Warner's King, Rambour Franc, and London Pippin. Adams' Pearmain, Duchess of Oldenburg, Golden Pippin, Blenheim Pippin, Tower of Glamis, Lane's Prince Albert, King of Pippins, Cox's Orange Pippin, Golden Noble, Cobham, Leyden Pippin, and Wellington all have full crops. Pears are not generally bearing an average crop, some being very light indeed. The best bearers are Beurré Hardy, Williams' Bon Chrétien, Pitmaston Duchess, Marie Louise, Gilogil, Althorp Crassane, Marie Louise d'Uccle, Beurré Capiaumont, Emile d'Heyst, Doyenné d'Ete, Thompson's, Easter Beurré, Dunmore, and Ne Plus Meuris. Plums are under the average, but Pond's Seedling, Coe's Golden Drop, Green Gage, Victoria, Early Orleans, Kirke's, Early Prolific, and Prince Englebert may be mentioned as bearing a full crop. Cherries both of dessert and Morello kinds have borne extremely heavy crops, and are quite free from aphis. Bush fruits have been very abundant. Gooseberries, of which there has been frequent complaint as to the shortness of the supply, are with me a heavy crop. Red, Black, and White Currants have also been good. Raspberries suffered very much through the severity of the winter, many canes being killed almost to the ground, but this loss has been made good to a large extent by the free-bearing of the young sucker growths. Some very fine fruits have been gathered since the rain, which, happily, came just in time to prevent the pending collapse, threatened by the severe drought. Strawberries promised an abundant supply, but the tropical weather and an entire absence of water reduced the bulk quite one half. The quality, however, was good, and the troubles consequent on a wet or showery season from slugs and other insects almost unknown. Sir Joseph Paxton, President, James Veitch, Alice Maud, Noble, and Laxton's Latest of All were our best. The last-named was invaluable, and furnished dishes of good fruit after all others had gone. Peaches, Nectarines, and Apricots are an average. Filberts and Walnuts an abundant crop. The foliage of Peach trees was badly blistered in the early spring, but good growth was made later, and is now quite free from insects.

Early and mid-season Potatoes are excellent both in point of crop and quality, Snowdrop and Beauty of Hebron yielding a sack to the rod. Late ones look well in the stalks, and the recent rains following on such a drought have set up a few secondary growths in the tubers. Onions, Vegetable Marrows, and Peas are attacked with mildew, the last suffering badly from want of root moisture, the crop, as a consequence, being light and of short duration. Globe Artichokes were much crippled by the intense frost, and the spring Cabbage crop reduced one half from the same cause. Cauliflowers, French and Runner Beans have done remarkably well, the season apparently suiting them. Considering the great extremes of the winter and summer and the plague of slugs in spring, the garden crops must be taken as very satisfactory.—W. STRUGNELL.

Glewston Court, Ross.—The past severe winter did not injuriously affect any of the fruit-bearing trees or plants, and the crops, on the whole, are very satisfactory. Apples in our plantation of bush trees are a very heavy crop, all varieties bearing profusely. Plums are also an excellent crop. In the middle of June the drought was beginning to affect these dwarf trees, and we irrigated the whole ten acres by means of steam engines, pulsometer pump, and hose until we had conducted over one million gallons of water over the plantation. The result of the same is healthy trees bending down with very large fruit, some of which we have been consigning to market daily since July 10. Standard trees in orchards are variable, some bearing good crops and others scarcely any. Cider Apples are a heavy crop. Pears are a poor crop generally both on walls and in the open quarters. Plums good in every respect. Damsons a very heavy crop. Bush fruits have done remarkably well with the exception of Raspberries, which have not been up to the average. Strawberries a fair crop. Cherries of all sorts excellent. Nuts an average crop, but Walnuts the heaviest crop I ever saw. Apricots, Peaches, and Nectarines the best we ever had; the first particularly set so freely, that great quantities had to be pulled off the trees.—S. T. WRIGHT.

Tortworth.—With very few exceptions the fruit crops in this district are very satisfactory. Apples are a good average. Cider fruit much over average. Pears are under average, but very clean and good. Plums are a fair crop, particularly the earliest varieties. Cherries abundant and fine. Peaches and Nectarines quite an average crop; the trees have given less trouble to keep clean this season than for many years past. Apricots under average. Apricots do not do well on our soil, whilst a few miles away on the Cotswolds the Apricot does admirably. Small fruits have been most abundant and good. Strawberries very fine and their season a long one. Filberts and Cobs very abundant, also Walnuts. Quinces and Medlars over average and very good. The fruit crops on the whole and generally speaking are much better this year than we have had for many years.—T. SHINGLES.

Wilton House, Salisbury.—Apples heavy crop, quality good. Apricots very heavy crop, quality excellent. Cherries heavy crop, quality good. Currants heavy crop. Figs average crop. Gooseberries heavy crop. Nectarines and Peaches very heavy crop, quality excellent; early varieties ripe on south wall, unprotected, July 16. Nuts and Filberts average crop. Pears under average owing to unfavourable weather during the blossoming period. Plums average crop. Raspberries very heavy crop. Strawberries heavy crop. Walnuts average crop.—T. CHALLIS.

Toddington, Winchcomb.—Apples are a very heavy crop. The same may be said of Plums, Peaches, and Nectarines. There are good crops of Pears and Cherries, also of Strawberries, Gooseberries and Currants. Raspberries are rather a poor crop. The hot dry weather appears to have been beneficial to Apples, Pears, Plums, and Peaches. Although a quantity of the former have fallen, there are still heavy crops and the trees look healthy. Currants have been finer than usual. Strawberries felt the effects of the drought and are rather small. Raspberries are the least satisfactory, the canes having been injured by the severe frost last winter. One noteworthy feature of the season has been the almost entire absence of aphis.—J. CLERE.

Mount Edgcumbe.—We have a very abundant crop of all kinds of fruit this season. We have not suffered much from the drought, having had occasional thunderstorms, accompanied by nice showers. The only crop affected by the dry weather was the early Strawberries.

Seeds of all sorts came up well and vegetables are looking splendid, especially Peas and French Beans. Potatoes as yet are not showing any signs of disease and the crop will be a very good one.—S. J. RICHARDS.

Old Sneed Park, Bristol.—I have been here six years and never saw such a fine crop. The gardens open towards the south, and we are very short of water, so Strawberries and Raspberries suffered very much. I never saw such a crop of Strawberries as there was in the neighbourhood, although I have lived in Kent where they do so well. Pear, Plum, and Apple trees are loaded, and the branches are breaking down with the weight of fruit. We have three Fig trees, covering a wall 12 feet high and 140 feet long, but on account of the severe winter we shall get but few Figs. There is a heavy crop of Walnuts.—JOHN KENT.

The Nash Gardens, Kempsey, Worcester.—There are good crops of almost all kinds of fruit with the exception of Pears, which are very thin. Apples are very abundant. There is an average crop of Plums and over the average of Damsons. Strawberries have been a heavy crop, also all kinds of small fruits. Apricots, Peaches, and Nectarines are a good crop on walls where they have been well watered and mulched.

Other crops look fairly well, especially since the rain we have had, which commenced on July 18, just in time to save the late Potatoes. On this light soil we suffer very much from the Onion maggot, and I tried sowing sulphur in the drills, which I had seen recommended, but do not see any benefit thereby. Tomatoes are a splendid crop outside on walls and open border, but want sun now to ripen them up. Late Potatoes look well; early ones have been much smaller than usual, but good.—JOHN JUSTICE.

Astley Hall, Stourport.—There is a heavy crop of Apples and Damsons. Plums are good in places, but not general. Pears are very light about here. Small bush fruit has been very good, especially Red Currants, which in many cases only realised three farthings per pound for the grower. Black Currants have been very small owing to the dry season. The Raspberry and Strawberry crops have been very good.

Vegetable crops have suffered very severely this season. All summer vegetables have suffered from the dry weather, but the late showers have done much good and given a good start to all autumn and winter vegetables.—T. BORRER.

Coker Court, Somerset.—Apples are a very heavy crop. Apricots, Pears, and Plums moderate Peaches out of doors seem to be good everywhere. The Gooseberry crop is very vari-

able. In some gardens the trees are loaded, whilst in others there is no fruit whatever. Raspberries, Currants, and Strawberries have been a good crop in most gardens. Walnuts are plentiful.—Samuel Kidley.

Ashton Court, Bristol.—Small fruits have been very plentiful in some parts of this district, while in others they are very scarce. Strawberries carried very heavy crops where planted on level ground. Raspberries have been very similar to Strawberries. I at one time thought there would be very few, as they were very slow in making growth, and a great many canes died back half their length. The rain came just in time to assist them, and was the means of them bearing some good fruit. Currants have borne heavily in these gardens, while only about a mile distant I saw many bushes with very few fruits on them; the lightest crops were on light soil, and in some of the market gardens the summer pruning is neglected, which I consider is a great mistake. Gooseberries have been very light generally. During the severe frost of last winter the birds did great damage to the buds. The only variety that escaped is a variety Cockspur by name. This probably is a local name, as I have not heard of it before. It resembles the Ashton Red or Warrington both in growth and fruit. I cannot speak favourably of Cherries; the soil is too wet, cold, and heavy for them. I saw a few days ago some splendid trees of Morello carrying a heavy crop of fruit; these were on higher ground and the soil light. Pears are almost a failure this year around here. Some of the Apples are looking well, especially Codlins, and the trees are laden with clean fruit. I have seen a good number of young trees on the Paradise which are carrying splendid crops of fruit for their age. When grafted on the Paradise they come into bearing much quicker than those on the Crab, although the trees will not stand the number of years. It is very noticeable that Apples are not colouring so well this year as usual. Worcester Pearmain, Quarrenden, and other bright varieties are still looking very green. —Herbert Noble.

Compton Bassett, Calne.—Apples are very plentiful on some trees, but poor on others. Pears are a very heavy crop, Marie Louise, Louise Bonne, Doyenné du Comice, Pitmaston, Beurré Diel, &c., being very heavy. Peaches and Nectarines are a wonderful crop. Waterloo, from which we are gathering large supplies, is of good flavour, more so than usual. Plums are an excellent crop. Cherries are a heavy crop and of good quality. Gooseberries heavy, also Black, Red, and White Currants. Raspberries good. Strawberries the best I have had here in seven years. Damsons scarcely any. Walnuts and Cobnuts very heavy. Medlars and Quinces light.

The Potato crop promises to be excellent as regards the early varieties, being both heavy and of good quality. Later varieties look very promising, with no trace of disease at present.—W. A. Cook.

The Gardens, Bicton, B. Salterton.—The fruit crops, taken as a whole, have been, and are, very good. Apples are a very heavy crop and, with the late rain, promise to finish well. The kinds I find best here are Court of Wick, Cox's Orange, Blenheim Pippin, Hawthornden, King of the Pippins, Lord Grosvenor, Peasgood's Nonsuch, Scarlet Nonpareil, Devonshire Quarrenden, Lord Suffield, Sandringham, Baumann's Red Reinette, Warner's King and Syke House Russet. Pears are an average crop; the best are Beurré Bosc, Beurré d'Amanlis, Beurré Diel, Bon Chrétien, Duchesse d'Angoulême, Gratioli of Jersey, Forelle, Jargonelle, Louise Bonne of Jersey, Marie Louise, Marie Louise d'Uccle, Ne Plus Meuris, Pitmaston Duchess, Van Mons Leon Leclerc, and last, but not least, Doyenné du Comice; the two last I consider the best Pears. Plums are bearing well, most of them against walls. I have them facing east, west, north and south. The best with me are Belle de Septembre, Bryanstone Gage, Green Gage, July Green Gage, laden, and a good grower; Magnum Bonum, slight crop; Early Favourite, heavy crop, ripe third week in July on east wall; Diamond, good; Golden Drop, laden; The Czar, good doer and good crop; Pond's Seedling and Denyer's Victoria, laden, on north wall; Early Prolific maintains its name this season, as in general; Early Orleans, heavy crop; Washington, thin; Kirke's, good crop; Jefferson, rather thin this year, but one of the best Plums in cultivation, as is also Reine Claude de Bavay, average crop. —Jas. Mayne.

Longford Castle, Salisbury.—The fruit crop for 1895 may, on the whole, be pronounced a good average one. Apricots, Peaches and Nectarines set immense crops of fruit, and therefore had to be severely thinned. I may here remark that trees of Alexander, Waterloo and Amsden June Peaches on the same wall have ripened in the order in which their names appear. Cherries, both sweet and Morello kinds, have borne good crops. Plums, on the whole, are below average, and the same may be said of Pears, of which, however, Marie Louise, Clapp's Favourite, Williams' Bon Chrétien, Beurré Clairgeau, Durondeau, Doyenné du Comice and Glou Morceau are bearing good crops. Apple trees in orchard, as well as dwarf standards and espaliers in the kitchen gardens, are heavily cropped with good, clean fruit; indeed, the Apple crop for the year 1895 promises to be the most bountiful we have had for several years, and the trees, too, are in good condition. The same remark applies to all kinds of fruit trees here, notwithstanding the unusually severe frosts which we had in January and February last, followed by an equally exceptionally hot, dry summer. Gooseberries and Currants have been heavily cropped. Raspberry canes were somewhat injured by the frost, the top 15 inches of growth having been killed; still, they have yielded sufficient fruit for our requirements. The Strawberry crop was a fair one. Figs good on open walls. Walnut trees I do not remember having hitherto seen so heavily cropped as they are this year. Filberts and Cob Nuts are also plentiful.—H. W. Ward.

Croome Court, Severn Stoke, Worcester.—Apples of all kinds are a very heavy crop, and the fruit will evidently be of good size, brightly coloured, and very free from grub. Pears on standards are thin, but on the walls a good crop, and, considering the long period of drought we experienced, will be of full size and of good colour. Apricots, Peaches, and Nectarines are also a heavy crop, very highly coloured and ripening early. Amsden and Alexander over; Early York just coming on; Alexandra Noblesse and Grosse Mignonne will be of full size, judging from present appearances. Bush fruits of all kinds were a heavy crop, particularly Red Currants. Plums on walls are a good average crop, but on standards not so good a crop as usual. They are largely grown in this neighbourhood as orchard fruit, and although most all kinds are planted, those in most favour are Rivers' Prolific, Victoria, and Pershore Egg, the last named invariably producing heavy crops, which find a ready sale, both green and ripe. In addition to the above-named the following are extensively planted: Diamond, Orleans, Pond's Seedling, Jefferson, Kirke's, and Green and Transparent Gages. All these do remarkably well here, and many thousands of hampers are marketed annually. Planting continues to increase rapidly, thus proving how valuable the crop is. Our soil is a strong loam resting on yellow marl, and the trees make a good, but not too strong a growth. Damsons are a good average crop, but the fruit will, I think, be rather small. Nuts and Walnuts are a full crop. —Walter Child.

Bryarston, Blandford.—Strawberries were an abundant crop and fruit very fine (but the beds here were heavily mulched and frequently watered, which greatly assisted the swelling of the fruit). The crops in the neighbourhood have been plentiful, but the fruit small. Gooseberries and Raspberries very plentiful and fruit fine. Red and Black Currants good crops, but fruit small. Apricots fair crops, but fruit not so large as usual. Plums good crops and fine fruit on walls; on standards, &c., in orchards very light. Cherries, Sweet and Morello, plentiful crops. Pears rather below average with the exception of M. Louise, B. Bachelier, Louise Bonne of Jersey, and Beurré Diel; these are carrying good crops. Apples are very plentiful, especially late varieties. Walnuts have never been so plentiful. My impression is had we not had a severe winter fruit would not have been so plentiful; owing to the very mild autumn the trees made such late growth that they could not get properly matured, but owing to the long spell of severe weather everything had a thorough rest.—A. J. Allsop.

Batsford Park, Gloucester.—None of our fruit trees sustained injury from frost at the period of flowering and many of them have crops almost beyond what they are able to bear. Especially does this apply to Apples of nearly all sorts and of trees of various sizes, large standards in orchards and pyramids in the garden being heavily laden. During the severe weather of last winter much damage was done by birds, especially bullfinches, to the buds of Plums and Gooseberries, and to a less extent Pears, Apricots, &c., and it became necessary to protect with nets. This thinning of buds, although in no case causing failure, has made some of the crops lighter than they would otherwise have been. May and June were dry months and but little growth was made until after the rain came, when the change was remarkable, and most of the trees now look very healthy and are bearing fine fruit. Rarely has there been so little injury on the whole caused by blight and insect pests generally as this season. Wasps are, however, very plentiful and most destructive. Peaches and Nectarines made indifferent growth last year and the wood never ripened properly from want of sunshine, and these crops are not over-abundant. The fruit of the earliest varieties was small; later ones are better, especially Dymond, Royal George, Bellegarde, Grosse Mignonne amongst Peaches, Elruge and Hardwick being the best Nectarines. Apricots were of good quality, but far less in quantity compared with the last two years, when the crops were exceptionally heavy. Moorpark and Large Early are the varieties grown. Early Prolific is the earliest Plum we have and is excellent for cooking, the other varieties bearing best being Webster's, Brahy's, and Bryanston Gages, Pond's Seedling, Cox's Emperor and Victoria. The chief standard Plums in this neighbourhood are of old varieties, especially of Pershore, which has very heavy crops and is used for cooking and preserving. Victoria is also fruiting well as a standard and appears to be one of the best for the purpose. Standard Plums are not extensively cultivated in orchards. Several varieties we planted in this way are making good growth, but are not quite old enough to judge. The best flavoured Plums include the varieties of Gage mentioned above and the old Green Gage, Jefferson, Kirke's and Coe's Golden Drop. Dessert and Morello Cherries very good, the fruit large and the trees exceptionally free from black fly. Figs were cut hard back by frost and there are in consequence no fruits. Apples, as before remarked, are most plentiful and promise to be very fine. Blenheim Orange and Keswick Codlin amongst large orchard standard trees are quite conspicuous, and garden pyramids of many varieties are pictures, so well laden are they with fruit. Ribston and Cox's Orange Pippins, Irish Peach, Worcester Pearmain, Margil, Court Pendu Plat, Gravenstein, Stirling Castle, Lord Suffield, Tower of Glamis, Warner's King, Ecklinville, Blenheim Orange, and many others have excellent crops. Pears are not so plentiful here as last year excepting a few that invariably bear well and which are used for stewing, Vicar of Winkfield for example. Marie Louise, Doyenné du Comice, Emile d'Heyst and Thompson's are thin, but the fruits promise to be fine. A variety which succeeds well as a pyramid on the Quince stock is Conseiller de la Cour; it bears most abundantly. The fruit of Clapp's Favourite, Beurré d'Amanlis and Pitmaston Duchess is very large on pyramids. Strawberries were plentiful, of

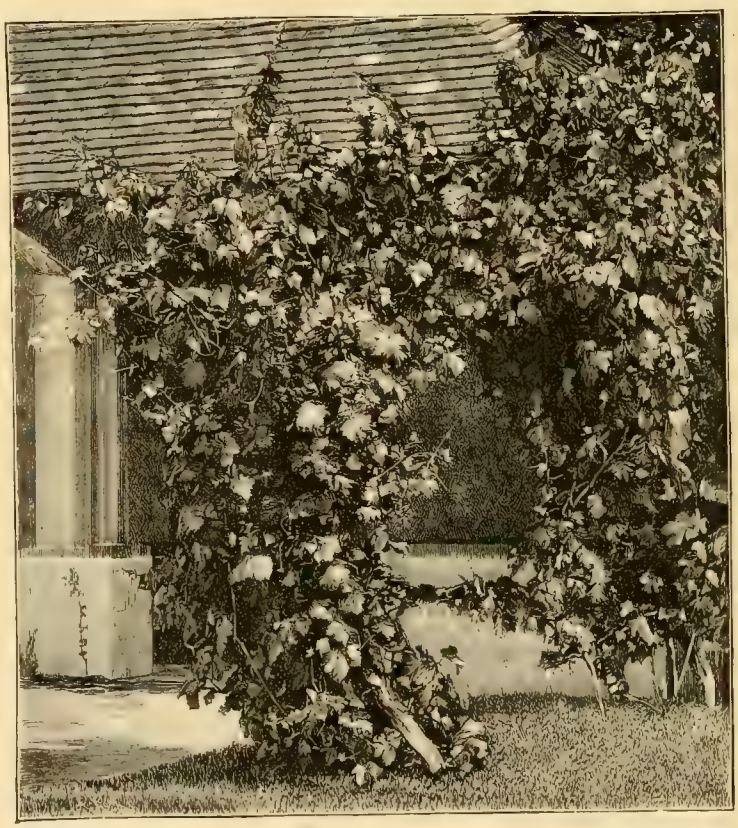
large size and excellent quality, and the crop was not badly injured by the drought. The soil being fairly retentive of moisture and the beds mulched with short straw combined to assist the plants in a dry season like this, and in the absence of rain none of the fruit decayed before being gathered. It is a great advantage to have young plants, as the oldest plantations are always those to suffer first from drought. My system is to make a new plantation each year towards the end of August and destroy one of about a similar size that has been longest established, three years being, as a rule, the limit. The four varieties depended upon both for forcing and outdoors are Keens' Seedling, Vicomtesse Héricart de Thury, Sir Joseph Paxton and President. Raspberries were a good crop and of fairly large size considering the dry weather. When about half were gathered the birds devoured nearly all the rest so soon as they turned colour. It seems strange that sometimes they scarcely touch them, but this is also my experience with other garden crops in different seasons. Currants of all kinds were abundant and good. An old Quince tree is bearing well and Nuts and Walnuts are plentiful.

Vegetables in the spring months were scarce here, as elsewhere, in consequence of the severe winter. Many seeds came up very indifferently or the seedlings died off soon after getting above ground. Early Peas did badly and none have really done well so far. Cabbage plants survived the winter, but were a month later than last year in coming into use. Early Potatoes escaped frost and have been good in cropping and excellent in quality. The later ones improved wonderfully after the rains came and at present look promising. Cauliflowers and Turnips have done badly all the season, but Autumn Giant Cauliflower is better. Asparagus did well and the late Argenteuil variety prolonged the season. Tomatoes are cropping heavily on outside walls and beginning to ripen. Celery, Runner Beans, Vegetable Marrows, Brussels Sprouts, and all green crops have been thriving satisfactorily since the beginning of July, and with more favourable weather the vegetable supplies should for the remainder of the season be more easily maintained.—J. GARRETT.

Iwerne Minster, Blandford.—We are in the midst of the eighth month of 1895, a year already remarkable for extremes in temperature. The mild autumn of last year seems to have well matured the fruit-buds, for although the long succession of frosts, which began with the year and lasted till the middle of March, wrecking our kitchen garden and leaving indelible marks upon Tea Roses and tender shrubs and trees, did not seem to have hurt the fruit-buds, for with the one exception of Pears, which are a partial crop, I have seldom, if ever, seen a finer show of bloom or a better set of fruit. But the decisive drought in early summer checked the embryo fruits, thinned the crop, and prevented them swelling. Many heavily-laden Apple trees had begun to lighten themselves before the rain came to the rescue. There is still an abundant crop of Apples, and the late rain has done much to swell the fruit. Some of the dessert kinds, such as Kerry Pippin, Quarrenden, and Red Ingestre, are already showing by their red and yellow streaks that they are approaching maturity. Plums are also a good average crop and the trees look healthy. We grow only the well-tried kinds, the old Green Gage and several of its varieties for dessert, also Jefferson, Kirke's, and Coe's Golden Drop. The last will sometimes hang till nearly Christmas. I can find nothing to equal the Green Gage for flavour. Of course all the above kinds require the protection of a wall to bring out their best bloom and flavour. For cooking I grow the red and yellow Magnum Bonum, Orleans, Victoria, and the Czar, which all do well here and in the locality as standards. Bush fruit and Strawberries have carried heavy crops, although the fruiting season of the latter was shortened by the drought. Nuts are plentiful, especially Walnuts.

Peas, Beans, and all other vegetable crops are plentiful and good. Early Potatoes were a light crop, but second earlies, such as Puritan and Windsor Castle, two excellent varieties, have fine tubers, cook mealy, and are delicious in flavour. Late varieties are looking well, and as yet are free from disease.—P. DAVIDSON.

Killerton, Exeter.—Apples are a very heavy crop in all parts both in orchards and gardens; all the fruit is very fine. Apricots have been very plentiful and the trees are very healthy. Cherries have been good; Morellos are now very fine, both in crops and the size of the fruit. Peaches and Nectarines are a heavy crop and trees healthy. Pears are only an average crop. Williams' Bon Chrétien, Comte de Lamy, Passe Colmar, Winter Nelis, Monarch, Beurré Clairgeau, Beurré Bachelier and l'Inconnue have all heavy crops. Figs are a good crop on the walls and the fruits are ripening well, two of the most free bearing sorts being Brown Turkey and White Marseilles; the Brunswick is also good. Old trees of the same sorts as bushes or almost standards have suffered terribly the last few severe winters in the open ground, although in a high well-sheltered position and only exposed to the south. Currants of all sorts and Gooseberries have been fine and plentiful. Strawberries also have been very good. Raspberries have been only a moderate crop, many of the canes having been killed by the frost. Plums are only a partial crop; the best are Early Prolific, Victoria, Denniston's Superb, Gisborne's, Mitchelson's, Green Gage and Jefferson, the last two sorts, also Coe's Golden Drop, being on walls. Damsons are good; the Chester or Farleigh has to be well supported to prevent breaking down. In the orchard the Plums do well, the sorts are Early Prolific, Green Gage, Magnum Bonum (White), Victoria, Mitchelson's and Prince Englebert, the last-named being generally the heaviest bearer of all. When we have very heavy crops the markets are too glutted to sell at a profit, and I think it more profitable to grow good Apples, such as the Blenheim Orange and Bramley's Seedling. Among the best flavoured Plums are the Green Gage, Jefferson, Coe's Golden Drop and Dennis-



Vine growing on a gazebo. Engraved for THE GARDEN *from a photograph by Miss Willmott, Warley Place, Essex.*

ton's Superb. Filberts, Cobs and Walnuts are plentiful.—JOHN GARLAND.

TREES AND SHRUBS.

VINES AS CLIMBERS.

ONE lovely family of climbing plants is little thought of in gardens—the Vine. None is more familiar because grown for its luscious fruit, but it is in the garden, rambling over arches, hiding ugly corners and festooning pillars, as in the R.H.S. Gardens at Chiswick, that we want to see this graceful creeper. The accompanying illustration shows its beauty as a climber, its noble foliage and its charming grace. A Vine leaf is more beautiful in itself than any leaf; then we get the flowing tendrils, the clusters of fruit, pleasing if they never colour in our cold clime, and the glorious leaf tints of autumn.

We all know the richness of a vinery in autumn, the ruddy crimson, bronzy purple, and scarlet leaves, mingled together or seen separately, showing a wealth of colour richer and more lustrous than a houseful of flowers. Yet with such resplendent colouring the Vine gives place to the Virginian Creeper and many other common things that one tires of from their constant repetition. Ampelopsis and Vitis are now amalgamated, but there is far more beauty in the true Vine than in the Ampelopsis, especially those ragged rampant kinds whose foliage dies off without a sparkle of autumn colouring. For autumn colouring the Californian Vine (V. californica) is unique, its leafage changing to deepest crimson, and the Northern Fox Grape (V. Labrusca) is familiar by name in this choice family. Then we get beauty in some form in the Southern Fox Grape (Vitis vulpina) and superb leaf colouring in Vitis Coignetiæ, which is one of the newest additions. It has been exhibited a few times, and on each occasion its beauty has compelled admiration. If I were allowed only one Vine I should select this for its handsome broad foliage, which changes to brilliant crimson ere it falls, and creates a garden picture of intense colouring and attractiveness. Japan has given us a noble climber in this Vine. In warm years the Hop-leaved Vine (V. heterophylla humulifolia) is covered with a profusion of turquoise-covered berries. I remember a splendid plant of it in Mr. Kingsmill's garden at Harrow Weald, a mass of the small jewel-like berries. This Vine is best on a wall, where we get a profusion of berries. The variety purpurea of the common

Vine (V. vinifera) has purple-coloured foliage, and the Tinturier Grape, too, is as rich as a colony of flowers in its autumn colouring.

It is to be hoped gardeners will look after the many beautiful Vines and plant them in such positions as the illustration depicts. An interest that we can get in no other way will be added to the garden at all seasons by their use. C.

Hibiscus syriacus.—This Mallow does not not succeed where the soil is at all mixed with chalk, or indeed where little but clay abounds. A warm sandy loam or peat will grow this shrub to perfection. I grow several plants of three or four distinct colours in a mass in a southern exposure. Even here in the south if the autumn rains set in early and continue many of the blossoms fail to develop properly.—E. M.

Chrysanthemums.

SEASONABLE NOTES.

The month of August is a busy one amongst cultivators of Chrysanthemums. In addition to the watering that requires so much care, necessary manipulation of the shoots and buds requires daily attention. Especially is it necessary in growing Chrysanthemums to attend to the requirements of the plants just at a time when required, or failure is certain.

The principal item is now the "taking" of the buds. As fast as these form in the points of the shoots they should be examined, and if found of good form, devoid of any irregularity or blemish, they should be "taken." This phrase is a common one amongst cultivators, but to the inexperienced it may be misleading. It really means removing all growth shoots, so as to concentrate the energy of the whole plant into the swelling of the flower-buds. If the removal of the shoots is deferred for a few days longer than is necessary, they appear to rob the bud of its power of development to such an extent, that it seems to lack power to swell to its normal size, and consequently receives a check. Early in the morning when the foliage is laden with dew, or in the evening, is the most suitable time for bud "taking;" the shoots then being more succulent, they snap off so much more readily than if left until the middle of the day, when they are somewhat limp and flaccid owing to the heat of the sun and a want of moisture in the air. Where large blooms are required, no time should be lost after this date in securing the buds; any plants that are allowed to "run on" after this date will not be very satisfactory.

Feeding the plants should now receive some attention; it is useless to attempt to grow good plants or large blooms without the aid of artificial stimulants of some kind. The Chrysanthemum is a gross feeder. No matter how rich the soil was made at potting time, it is sure to be exhausted very considerably of its nutritious qualities. When the newly-formed buds are seen to be swelling freely, liquid manure made from cow or sheep manure and soot should be freely given. Where the plants are healthy and have fairly well-ripened wood and matured leaves, and the pots not more than 9 inches in diameter, liquid manure in a weak state may be given every time the plants require water. Although the above-named stimulant is one of the best that Chrysanthemums can have, it would not be wise to stick entirely to that kind for the whole of the season. A change of diet is good for Chrysanthemums. After giving liquid manure to the plants for a fortnight continuously, give nothing but clear water for two days, so as to cleanse the plants as it were. A sprinkling on the surface of any of the artificial manures so freely advertised, following the directions so clearly given with each, will then be beneficial to the plants. Return again to the liquid manure in a few days for another two or three weeks, so alternating the food supply that the plants cannot possibly be "gorged" by any one stimulant. The remarks on feeding the plants are alike applicable to those grown as bushes, trained specimens, or in any other method. During the late and continuous spell of wet weather the foliage on some plants exhibited a tendency to become pale in colour. With the advent of warmer and brighter weather, most of the plants have again assumed their wonted colour. Those not having done so will be all the better for a dose or two of sulphate of iron given in liquid form; 1 ounce dissolved in a gallon of water is a safe quantity to give the plants at an interval of two days. It is really surprising what a quick effect this has upon the colour of the leaves of the plants. Where lime does not exist naturally in the soil in which the plants are growing it is a good plan to occasionally well soak the soil with lime water, adding as much lime to a canful of water as will be held in suspension. When the lime in bulk settles at the bottom of the vessel the water is strongly enough impregnated with lime. Not only is this treatment beneficial to the plants themselves, but the lime rids the soil of worms. Surface roots should be encouraged as much as possible, for these have a decided effect upon the flowering of the plants. When the plants are allowed to become dry too often, a fair quantity of surface roots can seldom be found. Now is a good time to set about the increase of surface roots. Plants that have their buds "taken" are in greater need of assistance at the roots than at any other period of their existence, because of the extra strain of supporting both leaves and buds. A top-dressing of some rich food is obviously the best means of affording additional food and encouraging surface-root action at the same time. No one can err in employing fresh turfy loam, sufficiently decayed to destroy the grass. Two parts of this to one of bone meal, dissolved bones, or any of the different manures advertised will form a good rooting medium if laid on about three-quarters of an inch thick and pressed down firmly. It is a good plan to well soak the loam with liquid manure before using it. Freshly-gathered cow manure mixed with loam in equal proportions provides a good rooting medium. This freshly laid on compost is apt to become washed off the roots in applying water at first, but if a piece of crock is laid upon the soil where the water is usually poured on in watering the plants, this defect will be averted. Mildew is becoming troublesome, attacking the underneath side of the leaves. In mild cases flowers of sulphur dusted on the parts affected is sufficient to stop the progress of the fungus, but in stubborn cases, or where difficult to apply the sulphur in a dry state, the lime and sulphur composition so often recommended should be employed. No one using this antidote need be troubled long with mildew upon the plants if every part is thoroughly wetted. E. Molyneux.

CHRYSANTHEMUM MME. C. DESGRANGE.

This is still the most useful early variety in cultivation. When grown for large flowers, by disbudding the shoots and adopting liberal treatment it produces really handsome massive blooms. No one perhaps has been able to produce such splendid specimens as Mr. Blackburn grew and exhibited for several consecutive seasons, but still I have frequently seen flowers from 5 inches to 6 inches across. Such flowers are highly valued for their purity of colour and graceful formation. To obtain blooms of the dimensions named it is wise to begin early in the season, so that the plant may have a long period of growth. Mme. Desgrange generally provides an ample supply of stout, healthy cuttings, which should be rooted in early autumn before severe weather sets in, as it is not among the hardiest of Chrysanthemums. I prefer to strike the cuttings singly in small pots. The plants can be kept dwarf and stout by wintering them on the shelf of a cool greenhouse, and at the approach of spring they should be shifted into 5-inch pots. Use the compost without anything strong in the way of manures in the early stages, the roots being thread-like and tender. Give the plants subsequent shifts, so that at the final potting 9-inch pots may be used, at which time, too, a little concentrated manure should be added to the loam. About the middle of June the shoots, which had previously been trained to one single stem to a plant, may be topped. This item is of much importance. The topping assists growth before buds appear, as this variety has a tendency to give flower-buds in quick succession after the month named. From three to half a dozen blooms may be perfected on a plant, and when the buds are swelling liquid manure should be applied often and weak. Shade when the flowers are opening adds to their purity. Mme. Desgrange again is excellent for outdoor culture, and the plants may be taken up, potted, and placed under glass to flower. It is necessary to keep the roots and leaves moist and in the shade for a few days after lifting. New roots form readily and established plants are soon obtained.

There are three distinct sports from the type. Mrs. Burrell has a soft shade of primrose-yellow; this is an excellent variety. G. Wermig is of a deeper yellow colour; this is perhaps the best of the sports. Mrs. Hawkins produces blossoms of a deeper shade of yellow than either, but the growth is not so robust as in the type or in the other sports. H. S.

Societies and Exhibitions.

NATIONAL CHRYSANTHEMUM SOCIETY.

The first show of this society for the present season was held at the Royal Aquarium on Tuesday and the two following days. Dahlias were the leading feature, as little improvement seems to be made in the early flowering Chrysanthemums, most of those exhibited being old familiar kinds. The grand lot of Gladioli from Messrs. Burrell, of Cambridge, was a feature of the show, and among the miscellaneous exhibits, Apples of fine size and quality were largely shown, and hardy flowers in abundance.

Chrysanthemums.

Mr. E. Such, Maidenhead, secured premier honours for twenty-four bunches of Chrysanthemums, three blooms in a bunch, and not less than eighteen varieties. This was a nice fresh lot, comprising chiefly Mme. Desgrange, its sports, and well known pompon varieties. The best twelve blooms of Mme. Desgrange were shown by Mr. S. B. Wheadon, gardener to Mr. Collier, Bickley, but they were not so fine as we have seen this variety. Mr. Webster, Sussex Lodge Gardens, Clapham, was second. For twelve blooms of any large-flowering variety except Mme. Desgrange, Mr. C. Cox, gardener to Mr. J. Trotter, Brickenden Grange, Hertford, was first with an admirable stand containing fine blooms of E. Molyneux, Stanstead White, Richard Dean, Louise, Mme. E. Rey, Edith Rowbottom, and Commandant Blusset. Mr. Wheadon was second. Miss Debenham, St. Peter's, St. Albans, had the best twelve bunches of pompons, securing first prize, but we are sorry to see here again the same craze for size prevails. The shoots shown had been closely disbudded, and the exhibit

was just within the stipulated conditions, namely, three flowers of each. The best six bunches of C. Lady Fitzwygram came from Mr. J. Wright, Denmark Road, Camberwell. In the class for six bunches of large-flowered kinds, exclusive of Mme. Desgrange and its forms, only one lot was forthcoming, from Mr. Shaw, of Sherwood, Notts, to which the second prize was awarded. Mr. Pagram, gardener at The Whinn, Weybridge, had the best six bunches of any yellow variety, inclusive of Mme. Desgrange and its sports. The varieties shown were Mrs. Burrell, George Wermig, and Mrs. Hawkins. Mr. C. Cox was first for six blooms of large-flowered varieties, showing Miss Anna Hartshorn, R. Dean, Louise, Edwin Molyneux, Mme. E. Rey, and W. H. Lincoln. The best six flowers of Mme. Desgrange or its sports came from Mr. Wedekind, Warlock Road, Paddington; whilst the best vase or epergne of Chrysanthemums was shown by Mr. D. B. Crane, Archway Road, Highgate, a charming arrangement of flowers and suitable foliage.

DAHLIAS.

In the large class for forty-eight blooms, not less than thirty-six varieties, show and fancy kinds, Mr. C. Turner, of Slough, was first with a fine lot of well-finished blooms. The best were Prince Bismarck, Mrs. J. Downie, Gloire de Lyon, George Rawlings, Seraph, Mabel Stanton, John Standish, Chieftain, Dante, Maud Fellowes, and Mrs. Gladstone. Mr. J. Walker, of Thame, was second. In the class for thirty-six blooms distinct, the position was exactly reversed, Mr. Walker being first and Mr. Turner second. Mr. G. Humphries, Chippenham, had the best twenty-four distinct blooms, showing a fine regular lot of flowers, and Mr. J. T. West, of Brentwood, was second. For twelve distinct blooms Mr. West was first and Messrs. J. Cheal and Sons, Crawley, second. Mr J. Stredwick, St. Leonards, had the best twelve blooms in the amateurs' class, Mr. Starling (gardener to Mr. Raphael, Rosecourt, Havering) being second. Mr. Stredwick was also first in two other classes, both for six blooms distinct. The classes for pompons were well filled. In the large and open class for twenty-four bunches of distinct kinds, Mr. C. Turner was first with a superb lot. Not a few pompons were shown too large and overgrown, but the flowers in Mr. Turner's stand were what they should be—small, neat, well finished and charming in variety of colour and freshness. The best were Purity, Ganymede, Madeline, Favourite, Nerissa, Claribel, Diana, Douglas, Cecil, Captain Boyton, Mars and Madge. Mr. F. W. Seale, of Sevenoaks, was second, Messrs. Keynes, Williams and Co. and Messrs. Cheal being equal third. The best twelve bunches of pompons, also an open class, came from Messrs. J. Burrell and Sons, whilst Mr. G. Humphries was second. For six bunches of pompons, distinct (a class for amateurs or gardeners only), Mr. J. Hudson, of Gunnersbury House Gardens, was first, and Mr. W. C. Pagram, Weybridge, second.

So great has been the recent development of the Cactus section, that these varieties now make an important section, and they to a great extent monopolise the attention of visitors who care little for the stiff forms of the show and fancy Dahlias. The competition in Cactus and decorative varieties was strong, and we did not see the old decorative type at all, as varieties of the most perfect Cactus form are numerous enough to make up a class alone. In the open class for eighteen bunches, distinct varieties, six blooms of each, Messrs. J. Cheal and Sons were first with a grand lot of flowers, amongst which we noted Purple Prince; Blanche Keith, yellow; Matchless, very dark crimson; Wilson Noble, salmon-red; Harmony, orange-buff; Bertha Mawley, red; May Pictor, buff shading to yellow; Apollo, red; Delicata, pink and white; Beauty of Wilts, orange-red; Ernest Glasse, purple, and Kaiserin, yellow. Mr. C. Turner was second and Messrs. Keynes, Williams and Co. third. Mr. J. Burrell was first for twelve bunches of Cactus-flowered varieties, the following being of note: Gloriosa, Matchless, Mrs. Barnes, blush; Mrs. Peart, white; and Lady Penzance, rich yellow. Mr. F. W. Seale was second. For six bunches in the amateurs' class, Mr. J. Stredwick was first and Mr. G. Wyatt, gardener to Mr. Hilditch, Twickenham, second. Messrs. J. Cheal and Sons were also first for twenty-four distinct bunches of single-flowered varieties, a good lot, but we think somewhat weakened by the presence of several spotted kinds that are poor in effect and valueless in the garden. The best were The Bride, A. Perry, Lowfield Beauty, Miss Roberts, Formosa, Miss Henshaw, Demon and Rosebank Cardinal. Mr. F. W. Seale was second. For twelve bunches, distinct single varieties, Mr. E. Such, of Maidenhead, was first and Mr. C. Osman, Sutton, Surrey, second.

The best Gladioli came from Messrs. J. Burrell and Co., who were an easy first with a grand exhibit of about 120 spikes, beautifully fresh and varied, many of them unnamed seedlings of their own raising. Sunray, light salmon-red, was conspicuous for the great length of the spike, and Blushing Morn was lovely in soft blush colour. Mr. R. Morrow, Leominster, Hereford, was second.

MISCELLANEOUS.

The miscellaneous and non-competing groups made up a large portion of the show. Mr. T. S. Ware, of Tottenham, made a wonderful display of Dahlias in all sections arranged in a bold and distinct way, forming a great bank of colour relieved by slender sprays of Asparagus and backed up with Bamboos and tall Grasses. Messrs. Dobbie and Co. also showed Dahlias largely, especially the single Cactus-flowered varieties now to be had in many shades of colour. Mr. H. J. Jones, of Ryecroft Nursery, Hither Green, Lewisham, showed a graceful group of Begonias arranged with Asparagus and Ferns and backed up by finely-flowered Chrysanthemums in pots, and from Mr. Norman Davis, Camberwell, came a large group of Chrysanthemums, consisting chiefly of the variety Lady Fitzwygram, a really good kind that should become as popular as Mme. Desgrange. A group of Lilies and Chrysanthemums was also shown by Mr. Ware, whilst Messrs. J. Laing and Sons showed hardy flowers in quantity and fine Apples. Mr. Such, Maidenhead, showed Dahlias and Pyrethrums. Hardy flowers were well shown by Mr. Prichard, of Christchurch, and Sweet Peas by Mr. W. E. Tidy, of Havant. A group of flowering and fine-foliaged plants was shown by the Jadoo Fibre Co., the plants, admirable examples of their kind, all grown in this material. Table decorations were shown by Mr. J. R. Chard, of Stoke Newington, and Mr. G. Williams, of Ealing. A good collection of fruit (Apples, Pears and Melons) came from Mr. Miller, Ruxley Lodge Gardens, Esher; whilst Apples were very extensively shown by Messrs. Cheal, of Crawley, Mr. Spooner, of Hounslow, and Mr. A. Wyatt, of Hatton, Hounslow. Kerry Pippin and Irish Peach in Mr. Wyatt's collection were as fine as we ever remember to have seen these two kinds, and a quantity of each was shown in shallow baskets. The Apples all through were conspicuous for size, high quality and good colour.

Vegetable show at Chiswick.—The next meeting of the Royal Horticultural Society will be at Chiswick Gardens on Tuesday, Sept. 10. Prizes are offered in forty different classes for vegetables, and a good show is anticipated. Besides vegetables, however, the usual collections of hardy plants, Orchids, cut flowers, fruit, &c., will also be received at Chiswick, and any new or rare specimens will be examined by the various committees, which meet at 12 o'clock noon. At 1.30 there will be a vegetarian luncheon arranged by Mr. A. Hills, President of the Vegetarian Federal Union, and at 3 o'clock a lecture on "Garden Manures" by Mr. W. G. Watson will be read, and a discussion invited thereon.

Wasps.—Mr. Crawford must be favoured as to the presence of wasps, as here they are numerous. I have taken no less than ninety nests within a quarter of a mile of the garden. I find cyanide of potassium by far the most effective means of destroying the nests. I do not find that those wasps which are out during the daytime escape even when the nests are taken then. A visit to the nests two or three days afterwards does not reveal any flying about. When the cyanide is used in a lumpy state its potency lasts quite long enough to catch those that come in at night.—E. M., *Hants.*

PUBLIC GARDENS.

SUMMER FLOWERS IN THE LONDON PARKS.

REGENT'S PARK.

REGENT'S PARK is neither a pretty nor happy place for gardening. There is a depressing air about it, a damp heavy aspect, produced by the avenue of large trees that is not wanted where we wish to see the flowers and plants. But in this park we get many beautiful colour pictures, restful and bright, an absence of garish associations and jumbled-up arrangements.

It is pleasant to find that hardy plants are now thought much of in the London parks. Not many years ago scarcely a perennial was visible, nothing but tender bedders, very limited in number, a repetition of a few common things. We saw, however, in this park recently a bank of Hollyhocks in splendid flower, backed with deep green-leaved shrubs and surrounded with Paris Daisies. A bed which we admired greatly was composed almost wholly of succulents, large and small, with here and there the ivory-coloured flowers of the sweet-scented Tobacco (Nicotiana affinis) and Lilium auratum—a delightful association of glaucous tones. Succulents, when well planted without any straining after impossible effects, are very handsome, and by their distinct, bold and unique character break the tiresome monotony of the ordinary run of summer flowers. A very pleasing bit of planting is that in the form of a rock garden, in which, however, the plants are considered before the stones. There is no backyard rockery about this, but a mass of Saxifrages, Sedums and other creeping things, relieved by the beautiful sprays of the Maiden's Wreath (Francoa ramosa). Some of the spikes were the finest we have ever seen, strings, so to say, of pure white blossom. Araucaria excelsa was also used to break the surface.

Carnations were going past their best, but sufficient flowers remained to show what pretty masses had been in beauty, the variety Alice Ayres, one of the best of all for town gardens, rising from a groundwork of Musk. During the past few years the Fuchsia has become as popular as any plant used in summer gardening in the parks. In this park it is used well and not too freely. A bed of the variety Earl Beaconsfield, a very popular kind, and the white Tufted Pansy Countess of Wharncliffe was very pretty; also of the rose-purple Lady Heytesbury, planted amongst the old Pansy Lilacina. We do not see many mixtures, that is Fuchsias and other plants, or of mixed Carnations. Occasionally such planting turns out well, not often, however, the results being excessively crude and unpleasant. Fortunately, too, there is an absence of so many variegated things as we saw used in every park last summer. An epidemic of pale yellow, creamy white, and other objectionable leafage had set in until the eye wearied of such painful repetition.

We do not care so much as formerly for the semperflorens class of Begonias. They are dull looking, especially those with chocolate-col-

oured leaves and dark crimson flowers. A bed, however, of the variety rosea mixed with the free-growing and graceful Grass (Dactylis glomerata variegata) was pretty, also one of the dark-coloured kind named rubra with a dwarf yellow-leaved Fuchsia as a groundwork. At the present time one of the great features is the Celosia, which creates a gorgeous colour picture of shades of crimson and yellow, especially when mixed with the Cockscomb. They are grown largely, and add splendid colour to the month of August when many things get a little bedraggled. It is grateful to see hardy flowers, a group of Hollyhocks, and in the borders the perennial Sunflower, white Phloxes, Antirrhinums, and many others, whilst crimson and yellow Cannas let into a bay in the masses of shrubs and Bamboos show not only how well such plants thrive in London, but that an earnest attempt is made to get away from beaten tracks and achieve a more natural style of gardening.

Battersea Park.

As usual, the summer flowers here are confined chiefly to what is known as the sub-tropical garden, but in other parts of the park there are some good beds, especially near to the lodge of the superintendent (Mr. Coppin). We were pleased to see good use made of the white-flowered perennial Phlox, which made breaks of purest white. It suggested how fine an effect could be gained by getting a bold bed of it relieved by Gladiolus brenchleyensis or a good hybrid kind. A small bed of this Gladiolus mixed with Lilium auratum is very pretty in the Embankment Gardens at Charing Cross. Several borders at Battersea Park are filled with hardy plants, Phloxes, perennial Sunflowers, early-flowering Chrysanthemums, and with a brilliant and happily arranged broad edging of Gazania splendens. This is superb, the large Marigold-like orange flowers standing out against the tufted variegated leafage of grey and white. In another instance the border was planted with standard Fuchsias, Heliotropes, Dahlias, Stocks, and other things—a homely array of well-known flowers. Here, as elsewhere, the Fuchsia is made much of, all the usual varieties being grown in a pleasing way, the arrangement not too huddled up. In one corner we saw a group of Bamboos, which succeed well here, and are quite a relief to the Palms and Ferns placed out for the summer. In the sub-tropical garden proper, Datura suaveolens, Hibiscus syriacus, and Eucalyptus globulus relieve boldly-planted beds of monotony, the silvery leafage of the Eucalyptus in particular being in delightful association with the pleasing colour of the Heliotrope. Hollyhocks were at the time of our visit in full bloom, and about this portion of the park splendid specimens of Palms add a touch of tropical aspect to the surroundings.

Single tuberous Begonias are very fine here, particularly one bed, in which the flowers were large, varied in colour, and the plants compact, Dactylis glomerata setting off the many charming shades. There is much water in this park, and the margins, fortunately, are not left bare, as in Dulwich Park, where the lake, which is margined with flintstone, makes the growth of pretty water-loving plants impossible. In one portion of the lake at Battersea a mass of the common white Water Lily is protected, and this suggests how delightful would be some of the finer hybrid kinds, which there is no reason to suppose would not do well even near London. They are so handsome and splendid in colour, that we should like to see them tried.

MR. A. F. BARRON.

The council of the Royal Horticultural Society have read with surprise and regret the remarks which have lately appeared in some of the horticultural newspapers with regard to Mr. Barron's retirement. The council have for some time had before them the desirability of making considerable changes in the gardens at Chiswick, and in the early part of this year they determined to initiate these changes in the near future. Fully aware of the value of Mr. Barron's services for upwards of thirty years, recognising that he had well earned and thoroughly deserved a retiring pension, and anxious to show him every consideration, the council felt that at his age they could not fairly place upon him the burden of such a reorganisation as they contemplated, and they considered that they were consulting his best interests, as well as those of the gardens, in offering him retirement on an allowance of £180 a year. In replying to the council's communications, Mr. Barron thanked them for their generous recognition of his claims, accepted their proposal, and tendered his resignation from January 1, 1896. The council are glad to know, and to be able to assure the Fellows of the society, that he is perfectly satisfied. Having acted justly and generously towards Mr. Barron as they believe, and to his satisfaction, the council deemed the matter settled, and were themselves intending to promote a testimonial to him on his retirement, when they found that steps in that direction had already been taken. The council regret to find that they are charged with discourtesy towards the Chiswick Board. The charge rests on their appointment of a special committee to advise them as to the future of the gardens without communication with the board. They freely admit that it would have been advisable to have conferred with the board on the appointment of this committee. To any members of the board who may have felt themselves slighted at their omission to do so, they offer a frank expression of regret. They need scarcely say that the omission was due to an oversight, and not to any intentional discourtesy.—By order of the Council, W. Wilks, *Secretary. September* 2.

—— As one who has had some experience of what has been done at Chiswick in years gone by, I should like to add a few words to the discussion that has lately appeared in the gardening press relative to the retirement of Mr. Barron from the society's gardens. No one who is unacquainted with the various trials of flowers (both indoors and out), fruit and vegetables can have any idea of the labour and worry attached thereto. It is all very well for the committees to go to Chiswick and pass their opinion on this plant and that vegetable, but previous to this having been done, Mr. Barron makes himself thoroughly conversant with every plant, fruit and vegetable sent in for trial, his notes embracing the season through. Take Peas; he used to go through them every day, noting the height, day they came into bloom, when the first pods were ripe for use, and their synonyms. This alone entailed a deal of labour and thought. So with all the trials that were conducted in the garden the greatest care was exercised, and without any favour the value of each and every variety was marked. In one case I well recollect—viz., French Beans—over three weeks was devoted to daily examination of the varieties sent for trial. This was not all, as the dried seed was also carefully examined and classified according to colour, each Bean being divided into two and gummed on to a board covered with white paper, and then covered with glass as in a picture-frame. The collections of Pelargoniums, Phloxes, Pentstemons, Fuchsias, Heliotropes, Neriums, Verbenas, Cannas, Achimenes, &c., were also carefully noted daily. In what private garden can we find the same thing going on? Private gardeners on coming to Chiswick avail themselves of such collections, making their own selections and obtaining plants of the varieties they prefer. In the case of the trial of the Neriums all the known varieties were obtained from Hyères, and if memory serves me, these had to be bought, all this of course adding to the expense of the garden. I do not believe ever such a collection was brought together, every plant of which flowered and was noted. Again, as regards the shows, where could the R.H.S. find a better organiser than Mr. Barron?

Mr. Barr in a recent article called attention to the meagre amount of money allowed the garden, and the only wonder is how Mr. Barron manages to keep Chiswick in such fine condition on the "starvation" sum. What with wages, coke, manure, soil, in fact everything pertaining to a garden having to be bought, and that at a comparatively high figure, and repairs, the sum is certainly quite inadequate to carry on the place. Certainly much has been done of late in the way of repairs, but much more wants doing. There was, again, the distribution of the plants to Fellows, which entailed a deal of expense in propagating, potting up, attending to and sending out, this last involving an enormous outlay in the way of labour.

For many years Mr. Barron was secretary of the floral committee, but I find that his name has been left out and that of another substituted. As to the reasons which have led to Mr. Barron leaving Chiswick, we are in the dark, so to speak. We should like to see the report (as signed by the committee of experts) published. The gauntlet has been thrown down, and the secretary of the R.H.S., as representing the council, ought to make the Fellows acquainted with the facts of the case, as the business has been carried out in the most un-English way we ever heard of, and the gardeners of the United Kingdom will not rest until the whole matter is fully threshed out and made public.

I am very glad to see that a meeting has been held to further a testimonial to Mr. Barron for his life-long services to horticulture, and may the subscription list be a large one, not only as regards the number of subscribers, but also the sum received.—W. P. Thomson.

Report on Chiswick Gardens.—The following are the names of the gentlemen who were appointed by the council, without the knowledge of the garden committee, to report on the gardens at Chiswick. Those marked with an asterisk are members of the council: *C. E. Shea (chairman), *W. Wilks (secretary), H. Selfe-Leonard, *J. Douglas, *H. Williams, J. Willard, E. Hill, J. Jaques, and N. A. Barnes.

Notes of the Week.

Chrysanthemum Notaire Groz.—This has probably the most delicate shade of colour among the new earlies, a soft rosy blush. It is a Japanese of medium size and of French origin.

The yellow Balsam.—Referring to your note (p. 172) on this plant, I may state that it grows in large masses here, in cool, shady positions in a wood near the hall. I have not, however, seen it anywhere else in the neighbourhood.—J. Simpson, *Wortley Hall.*

Chrysanthemum President Borel.—One or two pretty examples of this were shown at the Aquarium show, but it is really an October-flowering variety. The colour is rich rosy purple, with a reverse of mingled gold and silver. It is of Japanese form.

Chrysanthemum Eugene Farez.—An early-flowering Japanese, which was conspicuous in Mr. F. Davis's group at the recent Aquarium show. The colour is a rosy crimson, paling a little with age, bright golden reverse, and very useful where colour is required.

Cyananthus lobatus.—Among autumn flowers for the rock garden there are few if any more beautiful than this lovely blue-flowered Cyananthus. In a sunny spot it gives a gay succession of bloom during August and September. Its flowers are of a deep purplish blue colour with

white centre. It is now flowering freely with Mr. Barr at Long Ditton.

Tufted Pansy Charm.—I should be glad if you will point out to your correspondent "H.," writing on p. 153, Aug. 24, that at the Viola conference, held at Birmingham last year the Tufted Pansy Charm had no special mention.—A. J. ROWBERRY, *President, Viola Conference.*

Chrysanthemum Harvest Home.—This is a decided acquisition to the early section. The colour is a bright rich golden yellow, suffused with crimson-orange in the centre. The blooms grow on long stalks, which render them valuable for cutting. It is a medium-sized Japanese.

Chrysanthemum Mme. Carmiaux.—A new early variety, a medium-sized Japanese, with drooping florets, which are slightly revolute. In build it is rather a deep flower and of a clear white colour, tinged with yellow in the centre. This variety was commended by the floral committee.

Buddleia Lindleyana, a Chinese species of doubtful hardiness, is flowering on a wall in the herbaceous grounds at Kew. The flowers, clustered upon long slender racemes, are small individually, and when first open are of a reddish purple colour, but fade to a much lighter tint with age.

Tiger Lilies.—The exceeding beauty of the Tiger Lily as an autumn flower is well seen at Kew, where large beds of it growing up among shrubs are brilliant in colour even from a very long distance. Such effects as this in public gardens should lead others to see the wisdom of growing the good things of each season in bold groups and masses.

Scabiosa graminifolia. — The Caucasian Scabious in its blue and white forms ranks high among the best plants for the flower border, and its relative here noted deserves an equivalent position among rock garden plants. Its tufts of long grass-like silvery leaves are pretty from spring to winter, and the flowers are produced in succession over a long season. A plant in the Kew rock garden is now in bloom.

Plumbago Larpentæ is quite as distinct and handsome with its deep gentian-blue flowers as its lighter tinted relative in greenhouses, but unfortunately it does not flower with the same freedom. It is, however, quite hardy and blooms persistently throughout the autumn months. A spreading mass of it in the rock garden at Chiswick has already commenced blooming, a certain indication of the approaching autumn season.

Ceanothus Gloire de Versailles is quite the best Ceanothus for gardens, and in some places may be trusted entirely outside if against a sunny wall. In the R.H.S. Gardens at Chiswick there is a pretty little bed of it, the plants here being treated in a different manner, namely, pruned hard back each year. When planted out in May they start into vigorous growth, and these shoots in autumn are terminated by beautiful panicles of bloom.

Dendrobium thyrsiflorum.—We have received from Mr. Bowring, Beechwood, Aigburth, Liverpool, a photograph of an exceedingly fine specimen of this. The plant carried thirty spikes of bloom, all open at the same time. This resembles D. densiflorum in habit, the flowers white with an orange-yellow lip. D. thyrsiflorum when well grown is very telling in a group in the show tent, the drooping racemes having a fine effect along with other Orchids.

Hardy Cyclamens.—We were charmed with little colonies of these in the pretty garden at Hardwicke Grange, near Shrewsbury, when there recently. At Kew also they are flowering freely, and have a pretty effect among the hardy Ferns, which, being thinly planted, appear to furnish just the amount of shade and shelter congenial to them. They are not difficult to deal with if planted under the conditions they like, but as they are less satisfactory in the conventional mixed beds and borders, they are much more neglected than they should be.

Chrysanthemum Louise.—This Japanese incurved variety seems to be one of the most valuable of all the recent introductions. It was shown in excellent form last year at the December show of the N.C.S., and at the Aquarium show on the 3rd, 4th, and 5th inst. it was represented by several good blooms. A variety that can be had in good form, no matter by what method of cultivation, for a period extending over four months is worthy of commendation.

Coreopsis abyssinica is a charming annual kind we noted at Kew, robust and bushy in growth, with narrow finely cut leaves and profusely bloomed. Its flowers are individually about an inch in diameter, but the number of them and their rich glowing yellow colour combine to make a bright effect equal to that of any of the larger-flowered sorts. The flowers consist of about eight broad rays, whilst the disc florets are also yellow.

Colchicums in the Grass are already flowering freely at Kew, making a pretty picture suggestive of autumn, and one that we should like to see more often. The soft pink flowers are singularly charming growing out of the rich green grass of late summer growth, and nowhere can this be better seen than at the foot of the mound at Kew, where we have often noted charming spring pictures. At the present time the Colchicums are welcome, and well deserve more attention.

Argemone grandiflora (the prickly Poppy) is a pretty flower of the present time, and now finely in bloom in Mr. Barr's nursery at Long Ditton. Although at one time thought to be perennial, it usually perishes on most soils during winter, but it is easily raised from seed sown in spring. If the plants are well thinned out they make large branched specimens 2 feet or more in height and diameter, with large white flowers each about 4 inches across, having a pretty tuft of yellow stamens in the centre.

Lobelia cardinalis Lord Ardilaun.—I enclose a small piece of a flower-spike of this Lobelia which was raised here by my predecessor, Mr. Campbell. With fair cultivation it grows quite 5 feet high and throws out numerous side shoots. It stood out in the borders last winter with only a slight covering of coal ashes. One night the thermometer fell 3° below zero. A quantity which was taken up, potted and wintered in a cold frame well protected with matting and hay succumbed. —T. SCOTT, *Ashford, Cong.*

Helenium striatum, as the name suggests, has striped flowers, but the shades of colour and the irregular manner in which they are blended give a quaint and charming colour-harmony decidedly pleasing. Yellow of an old gold shade and bronzy red are intermingled in an indescribable way, and the effect of the mass of flowers on a plant nearly 5 feet high now flowering at Kew is as good as that of a self-coloured variety. A striking group could be made by planting this in association with the similarly tall and handsome H. autumnale.

Sophora japonica is now very conspicuous at Kew, two large specimens being literally smothered with flowers, whilst the turf beneath them is white with the fallen bloom. This is a handsome tree in growth and rich foliage alone, whilst the fact of its bursting into bloom when most trees show traces of autumn tints adds greatly to its value for gardens. One rarely sees it, however, except in such places as Kew or in the Oxford Botanic Garden, where the specimen is one of the finest. Every twig of the trees is terminated by a large branched panicle of flowers and buds, that open in succession for several weeks.

Eulalias. — These tall and graceful hardy Grasses are now charming at Kew, both in groups associated with the Bamboos and as isolated tufts on Grass in the herbaceous ground. The Eulalia is much hardier than the Pampas Grass, many old-established groups of the latter having suffered greatly from the past winter, whilst groups of the Eulalia in its several forms are growing as vigorously as usual. Although the flowering stage is rarely reached by the Eulalia in our country, and in this respect it falls short of the Gynerium somewhat in point of beauty, its tall, erect, cane-like stems are abundantly clothed with the most beautiful leaves. Besides the green-leaved form, the variegated varieties are charming, especially E. japonica zebrina, with its transverse bands of yellow. E. gracillima is all that the name indicates, and the group of this at Kew is delightful. We note that these Grasses are no longer known at Kew under the name of Eulalia, which has been changed to Miscanthus.

Actinidia Kolomikta.—"F. W. M." in THE GARDEN, Aug. 24, p. 138, refers to a plant of Actinidia Kolomikta as being "perhaps the finest plant in the country." As a companion to the aforegoing plant, I would beg leave to call attention to another specimen growing in the gardens here. Eight years ago I procured a plant of this and planted it as one of a series of climbers, the Actinidia in particular being somewhat shaded from the sun. A 12-feet Spruce tree (with the branches shortened in) was sunk in the ground, the Actinidia was planted and encouraged to make its way to the top of the tree, which it did in about four years. It is now not a stiff and formal plant on a wall, but a handsome tree, 12 feet in height by 6 feet through, and beautifully furnished all round. The beauty of the plant is still further enhanced and also its vigorous growth proved by the rapidity with which the summer shoots run out and form festoons in all directions. I have never yet seen a flower. As to its thorough hardiness, there can be no question, for the severe frost of last winter never injured it in the least.—M. CHAPMAN, *Easter Duddingstone Lodge, near Edinburgh.*

The weather in West Herts.—A very hot week, the highest shade temperature on one day reaching 76°. The ground has also been unusually warm for the time of year. In fact the reading at 1 foot deep is now about 5° higher than the average temperature at this depth for the early part of September. No rain worth mentioning has fallen for over a week, and the drainage through the percolation gauges has almost ceased. During the past seven days the record of bright sunshine has been remarkably good, the duration amounting on an average to very nearly 10 hours a day. August was a warm summer month, particularly the latter half of it. Rain fell on as many as nineteen days, and to the aggregate depth of nearly 4 inches, or 1¼ inches in excess of the August mean for the previous forty years. The three summer months taken together were warm, and the rainfall in excess of the average. Although July and August proved unusually wet, the total fall of rain since the beginning of the year is rather more than 2 inches less than the mean.—E. M., *Berkhamsted.*

Gustav Sennholz.—In our obituary notice of this landscape gardener in the last issue the name should have been spelled as above, and not as in the note.

Names of plants.—*S. N. T.*—1, send again; 2, Epilobium sp.; 3, Dictamnus; 4, Gilia; 5, Evening Primrose (Œnothera Lamarckiana); 6, not recognised. We have done the best we could, but the specimens were far too poor to be quite certain as to names.——*H. J. D. Walker.*—Rose Ophirie.——*Anon.*—Oncidium curtum.——*Old Windsor.*—Bignonia radicans grandiflora.——*A. Maxwell.*—1, Cornus sanguinea variegata; 2, Cornus mas elegantissima; 3, Cornus mas var.; 4, Cornus brachypoda; 5, Abies pungens glauca. ——*Alpha.*—1, Acer dasycarpum; 2, Euonymus europæus; 3, Syringa Emodi; 4, Betula populifolia; 5, Ilex doningtonensis; 6, send better specimen.——*A. M. Z.*—Lomaria alpina.

Names of fruit.—*James Day.*—Plums, 1, Oullin's Golden; 2, Jefferson.——*J. C. Sheppard.*—1, Yorkshire Beauty; 2, Gravenstein.

No. 1243. SATURDAY, September 14, 1895. Vol. XLVIII.

"This is an Art
Which does mend Nature: change it rather; but
THE ART ITSELF IS NATURE."—*Shakespeare.*

ORCHARD AND FRUIT GARDEN.

SEASONABLE NOTES ON THE FRUIT GARDEN.

AT the present date, September 6, the drought appears to be more seriously affectiug fruit trees than it has done before this year. Many Apple and Pear trees that have not been mulched or thoroughly watered are casting their fruit in an alarming manner, and if we are fortunate enough to get rain, I question if it will be of much benefit except to the late sorts. The probability is that most of the early and mid-season varieties would decay rapidly from the sudden rush of sap after a copious rain. It has been pointed out in THE GARDEN on several occasions that our rainfall is considerably below the average for several years past, and attention has also been drawn to the dry condition of the roots of wall trees in consequence of this deficit. I think it may be advisable to again recommend giving all wall trees a thorough soaking of water now, thereby assisting them to perfect their buds and wood for next season, and keep red spider from completely spoiling this year's growths. Damsons in the open orchards are more violently attacked by this mite than I ever saw them before, and wall trees come next, followed by Gooseberry bushes. Apple trees are infested in a less degree, but some varieties of these are worse than others. As red spider will exist on the trees or bushes through the most severe winter, increasing and multiplying rapidly with the advent of warmer weather, it stands to reason that if all or a part can be destroyed this autumn, the attack will be minimised next spring. It is marvellous how much may be done to keep insect foes down by timely attention to the pests at this season, and, judging from my experience, I believe that autumn washing or spraying of fruit trees is more important and valuable than the same performed in early spring. As a case bearing on this matter, I may state that we have a plantation of Plums that some years ago was always subject to aphis and red spider attacks in spite of early washings with well-known insecticides. Immediately after the pruning was done three years ago the trees were thoroughly sprayed with the usual insecticide, and the result has been that no red spider and practically no aphis have appeared since, proving that the annual autumn washing is effective. Again, if Plum trees have to be sprayed in the summer when the fruit is more or less advanced, the bloom on the fruit is ruined. The Plums never look so attractive, no matter how large they may grow. Black Diamond is perhaps one of the worst Plums to show the effects of summer spraying, every spot of insecticide that falls on the fruit being very conspicuous when ripe. In those gardens where the labour is available it will be best to prune Plums, Peaches, Nectarines, Cherries, &c., at once, and then wash them afterwards, as the work can be performed more effectively and expeditiously with less waste of liquid than in the case of unpruned trees. It is not every gardener who can afford the time and labour to thus have the trees pruned and put in proper order, but when it is possible I strongly advocate pruning as early as convenient after the fruit is all picked; by doing so the wood and buds become hardened and well matured, calculated to pass through the most severe weather uninjured, and will start again in spring strong and healthy. A very large proportion of fruit trees is in a more or less exhausted state from the heavy crops they have carried this season, but in spite of these big crops I never saw trees of all kinds show more fruit-buds than they do now. Will this splendid promise be fulfilled next year? I think not, because so few supply sufficient plant food to enable the trees to bear good crops two years running. Opinions differ as to the best time to apply fertilisers to fruit trees, and no doubt soil and subsoil must have an influence on the same, yet I believe that an early autumn dressing of natural or chemical manures very materially strengthens and invigorates exhausted trees. On our light soil kainit proves a most serviceable manure for application in September. From three to five cwt. per acre is a fair dressing, and no anxiety need be felt as to its promoting a rank growth when the trees start again. The tendency is rather to induce a fruitful habit than a gross one. Liquid manure, sewage, road-scrapings, decayed vegetable matter, ashes from the garden rubbish heap, or anything of that kind may with advantage be given to trees in the fruit garden or orchard. W. G. C.

Cardiff Castle Cucumber.—For many years I have grown Telegraph Cucumber, considering it one of the best all-round varieties, but this year I have grown Cardiff Castle with it under exactly similar conditions, and found the latter far more prolific and bearing finer fruit for a longer period than Telegraph. Possibly some would remark that the season has been perhaps more suitable for Cardiff Castle than for Telegraph, but I think seasons have little influence on varieties of Cucumbers grown under the non-ventilating system and given the same compost and general treatment. When at the recent Cardiff Horticultural Show I asked Mr. Case (the largest Cucumber grower in Wales) what he thought of Cardiff Castle as a market variety. The answer was a very decided one in favour of the sort named, he also saying that no other variety could equal it for the purpose, which means a good deal when it is borne in mind that hundreds of dozens are sold per week by Mr. Case.—G. C. R.

Golden Perfection Melon.—This really first-class Melon is now seldom met with, which is rather difficult to account for considering how handsome in form and colour and delicious in flavour the variety is. I have grown this sort for a number of years in pits and heated frames with excellent results not only for my employer's table, but also for exhibition, on many occasions taking premier honours with it, for when well ripened there are few Melons to surpass it. Another great advantage is the healthy habit of the plants, canker never putting in an appearance on our light soil, while the fruit sets and swells remarkably well. Several gardeners who have seen it here have been astonished at the number of fruits per plant, saying they always thought the variety a shy setter. Such has never been my experience, and to those who require a pale fleshed Melon of high quality and free habit I can confidently recommend Golden Perfection.—G. C. R.

Apple Magnum Bonum.—This is an early variety that should not be confounded with that excellent dessert Apple Roundway Magnum Bonum, as the one under notice is a cooking Apple, somewhat resembling the old Keswick Codlin in colour, but entirely free from ribs; the surface is very smooth, straw coloured and dotted all over with tiny dark spots—in fact, it is a very attractive variety and a heavy cropper, so much so that the trees make scarcely any growth. To see the trees loaded with good-sized fruit of beautiful form many would imagine that it was eminently suited to grow for market, but though a most excellent Apple for home use, it is too soft and tender to ever become a favourite market sort.—W. G. C.

Apple Crimson Costard.—This Apple will, I believe, come to the fore ere long as an exhibition variety, as it combines size and colour, and is distinct from any other sort that I know. The first time I saw it I was judging with Mr. Petch at Manchester, and we both were struck with the beauty and size of the dish which formed a feature in the back row of Mr. J. Watkins's collection. I procured some bush trees two years ago, and this year they are bearing some fine fruit. Two of the best Apples were spoiled; one weighed 17¼ ozs. and the other turned the scales at 16 ozs., and would probably have been still heavier if uninjured. The fruit is conical in shape, nearly as red as Worcester Pearmain on the sunny side, and, judging from present appearances, the tree is going to be a profuse bearer in bush form.—W. G. C.

Currant Houghton Castle.—This is a valuable Red Currant. I grow no other variety, except upon a north wall where I grow the Red Dutch. Bushes of Houghton Castle in the open are generally covered with plump fruit the first week in October. All through the month of September it is found most useful when other small fruit in the garden is scarce. Much the best way to grow the trees of this variety is to train them at first with a limited number, say nine to fifteen main branches and a clean stem. From these branches the fruit is produced right down to the bottom of the trees, is always clean and good in colour and size. Besides, the gathering of the fruit is so much facilitated by the absence of so many small branches as one too often finds in bushes of Red and White Currants. By going over the trees once about the middle of June, lopping off the current season's shoots to within 4 inches of their base, not only is the fruit improved in its ripening, but it is kept quite clean by being exposed to rain and heavy dews, which effectually keep it clear of honeydew, which is so troublesome to Currants in some seasons.—E. M.

NOTES ON APRICOTS.

I OBSERVE several correspondents of late have complained of the behaviour of Apricots. During the last three years I have been most successful with them. The fruit has set so freely, that two out of three had to be taken off in their early stages. So abundant was the set, that I counted from twenty to thirty fruits on a shoot a foot long. The situation is not favourable to Apricots, seeing we are in a low valley and close to the water; consequently the trees suffer from spring frosts and also unripened wood. The trees are protected by a glass coping 2 feet wide; in front of this I hang curtains when the blooms are opening, removing them by day. Some cultivators object to fixed coping, but nothing could be more satisfactory with me. The border is a raised one with a sharp pitch, consequently it dries quickly. Some two years ago I removed most of the soil to the depth of 2½ feet, adding some chalk to the under spit and replanting the trees. This keeps the border very dry and causes the wood to ripen well. The greatest difficulty I have to contend with is to keep the border moist in dry weather, as the vegetables and tree roots absorb such a quantity of moisture. Having a good supply of water, I allow a hose to run a long time in each place. When the early Potatoes and Peas are cleared off and the fruit begins to swell the second time, I give the border a good dressing of an artificial manure, well watering it in and again in a fortnight. This works a great change in the fruit and colour of leaves.

From a wall space about 60 feet long and 12 feet high, two seasons following I gathered nearly 150 dozen, and this season close on 100 dozen. The cause of the smaller crop this year arose from the trees having but few fruits on the three lower

feet of wall, as the frost destroyed the blooms in winter on this space; nearer the top the blooms did not suffer in the least. This I attribute to the coping favouring the wood and bloom.

Some people are apt to think Apricots have a short season; this is not so, seeing most years I have them for three months. I begin with the Large Early, and find Powell's Late continues to give a supply till the end of the twelve weeks. Moorpark and its varieties are much the largest and best, but the trees are apt to die off, although I cannot complain in this way. It is now September, and I have enough to keep up the supply another fortnight. JOHN CROOK.

Currants at exhibitions.—At our show we allow exhibitors to stage Black Currants in single berries. By specifying in the schedule to this effect, all are placed on an equality. We do not, however, allow the same thing to be done with either red or white kinds, these being shown in bunches.—E. M.

Plum Angelina Burdett.—This is the best dessert purple-coloured Plum for those who cannot give it wall space that can be grown. The tree grows and bears freely either as a standard or spreading bush. When grown in the form of a pyramid it does not bear so freely, the severe pruning to bring it into form not suiting it. Another point of merit is that the fruit does not set in bunches; it is more evenly distributed along the branches, and therefore develops to a good size with very little thinning out. When the fruit is thoroughly ripe the flavour is excellent and the form is handsome as well; it also carries a good bloom, and is therefore effective on the dessert table. Of course, the tree may be trained against a wall where room can be given it, but then the richly flavoured Plums that can be ripened without the assistance of a wall are so few that the merits of Angelina Burdett in this respect cannot be too well known.—J. C. C.

Cox's Orange Pippin Apple.—It is surprising to learn that this delicious Apple will not succeed at Claremont, especially since King of the Pippins does well there. Perhaps the method of treatment or of pruning given there may differ from what is given elsewhere, but I have seen the variety doing well on sandy soil in other parts of Surrey, grown somewhat freely and only thinned, but in no respect spurred or shortened back. This Apple has been cropping wonderfully on dwarf standard or half-bush trees at Chiswick. These same trees not only fruited well last year, but do so usually. They are in no sense hard pruned, but, in common with all Apples at Chiswick, are well thinned. There the trees generally assume a drooping habit, and no doubt that very habit is most conducive to cropping. I saw Cox's Orange Pippin on standard trees at Sulhampstead, Berks, the other day, the soil being shallow on gravel, and yet in a grass orchard bearing splendidly and the fruit colouring up beautifully. In Middlesex I have seen the Apple doing wonderfully well on stiff clay, and again on gravel, and in districts in Surrey it does well on chalk. Generally it is best on the free stock, as it is never a coarse grower, and once it begins to fruit, the drooping habit in the branches is created, and afterwards maintained.—A. D.

THE APPLE CROP.

FROM all parts of the kingdom the same report comes to hand, viz., an abundant crop of Apples, and those who are directly interested in their culture, and especially those who contemplate planting during the coming season, should now take note as to which varieties are the most profitable, and, above all, which varieties succeed best in their own immediate neighbourhood. From my own observations I am convinced that too many of the very early Apples of the Codlin type, such as Lord Suffield, have been planted during the past twenty years, and as they all come into use about the same time as the Keswick Codlin, and must be sold or used within a very limited time, the result is that prices go down to a very low figure indeed. I never remember observing so many Apples affected with maggot. Probably some correspondents in other parts of the kingdom may be able to inform us if this pest is general, and what steps we can take to prevent its recurrence. Many people gather sorts that would be all the better for hanging much longer on the trees, and by forcing them on the market at a time when it is already overdone, the price is forced down below what it would otherwise be. It is of no use looking to townspeople to store fruit, for they have no space at disposal for the purpose, a veritable hand-to-mouth existence, and the storing, if it is done at all, must be done where the fruit is grown. Fruit farms are springing up in all directions. It is not enough to simply plant the trees and let the crop be carted straight from the trees to the nearest railway station or market, for this is only playing into the hand of the importers, as our home crop is gone as soon if it is a heavy one as if it is a light one, and the markets and high prices are left for foreigners to get the benefit. What is wanted is really good store houses that will defy heat or cold and on the ground floor and partially below the ground level. I have lately found such a place invaluable for retarding the too rapid ripening and shrivelling of the early sorts, for even a few days' retarding frequently means all the difference between a small profit or an actual loss. That we can grow the best Apples in the world has been proved over and over again, and with land almost going begging we ought to be able to grow enough Apples. To do this we must not only plant really late keeping sorts, but they must be stored in such a way as to ensure their keeping until the maximum price can be obtained in the market.

Gosport. JAMES GROOM.

SCALE ON VINES.

MY early Vines, now just finished, have been affected all the season as per accompanying leaves. The berries were good and of good flavour, but the top of the bunch looked as if mildewed. We have had a great deal of rain and the house is not water-tight. Is this the cause or what?—NEWCASTLE.

*** At first sight the leaves presented the appearance of being badly mildewed, but on a closer examination I arrived at the conclusion that the whole of the trouble had been caused by brown scale. The leaves sent were thickly coated by the at one time sticky excretions from the scale, some of which were still clinging to the foot-stalks. Although in a wretched plight, the remedy is far simpler than would have been the case if mildew had been responsible for the mischief. Syringing with hot water and petroleum, using the latter at the rate of 1 wineglassful to 2 ounces of petroleum, and a lump of soft soap about the size of a hen's egg to the gallon of water heated to a temperature of 120°, quickly clears a Peach tree of this pest if applied any time after the leaves are fallen. In the case of the Grape Vine, petroleum in any form is somewhat risky, as it is liable to penetrate through the porous bark to the sap vessels and cripple, if not actually destroy, the rods. Much good would be done by at once sponging the larger or primary leaves with hot soapy water so as to get rid of the coating of filth that hinders them from performing their proper functions, but the cleansing process must be largely deferred till the winter. After the pruning has been done, bunch the rods together and enclose with mats, thick canvas and such like, then give the old scale-infested roof a thorough cleansing with the petroleum, soft soap and hot water mixture previously alluded to. The petroleum should be kept from collecting on the top and being used at too great a strength by means of the syringe driving it downwards. Also wash the glass and dress all the brickwork with hot limewash. The rods may then be uncovered, roughly cleared of loose bark, and receive at least two good scrubbings with hot soapy water. Afterwards dress with Gishurst compound, dissolved and diluted according to instructions on each box (any seedsman would supply it), and well mixed with clayey water. Brush this well into every probable lurking-place of scale. Some few may escape the most drastic measures of cleansing, and a close look-out should be kept during the growing season for any that find their way to the leaf-stalks. If there is an inside border, remove the surface-soil after the other work has been done and top-dress with a rich loamy compost.—W. I.

GOOD RASPBERRIES.

I TRUST Mr. Engleheart, "D. T. F." and Mr. Bedford will pardon me not replying earlier to their courteous criticisms with regard to my note on the above. The delay has caused me to make inquiries as to the value of Superlative in various parts of the country, these confirming my previous notes and giving me much stronger facts than I could have otherwise produced. I am obliged to differ from Mr. Engleheart as to his opinion of Superlative, and I do not retract one word of my previous note as to its excellence, either as regards crop or flavour, on a poor, thin gravelly soil where other varieties have failed. If Mr. Engleheart and "D. T. F." will carefully read my first note (p. 40) they will find I did not refer to flavour, recommending Superlative for its cropping qualities and its value on a poor soil. I admit Baumforth's Seedling is an excellent earlier Raspberry, but not equal in a poor soil to Superlative. Mr. Engleheart takes Red Antwerp as his standard. I grew this variety years ago, and if my memory serves me right, it was remarkable for its sweetness. I never detected the least acidity in this old variety. I have this day (September 9) gathered fine fruits of Superlative, and though the canes have been bearing nearly two months, there was still the brisk flavour I alluded to. I also grew another variety, probably Semper Fidelis, the fruit of this being decidedly acid. Red Antwerp was grown for its sweetness and Semper Fidelis for cooking. On the other hand, do not seasons and soils affect the quality of fruit? At p. 147 Mr. Bedford says "he has no need to water, the drought having been a blessing." I had to water freely and mulch heavily. It was as a good dry weather fruit I advised Superlative. Again, Mr. Engleheart says his is a good soil; mine is the reverse. Baumforth's lives with me, but does not thrive. I am required to produce fruits in quantity, and Superlative up to this date has produced three times the quantity of other kinds. As to its value in a preserved state I have strong testimony. I will briefly answer "D. T. F." In my experience Superlative crops longer and heavier than Baumforth's. The last three seasons I have seen it fruit well into October. The reports from the largest growers are that Superlative is the best cropper and well flavoured. Another sure test is the demand for canes, the demand being so great it cannot be met. I have noticed some large quarters planted recently by well-known growers, and in the back numbers of THE GARDEN there are many references to Superlative and its good flavour. My opinion is that Superlative, though later than many others, is more prolific and not inferior in flavour. G. WYTHES.

Gathering fruit.—The note at p. 173 by "H. C. P." is most opportune, as at this date many will be thinking of gathering the earliest Apples and Pears. The season named for the storing of such kinds as Northern Greening and the others mentioned may by some be thought much too late, but such is not the case if the fruits are required to keep well into the spring; indeed I could largely supplement the list, but will briefly add that such kinds as Cox's Orange, Fearn's Pippin, and similar dessert kinds are much improved by free exposure till the latest date possible, as these fruits so soon shrivel in a close room, that when gathered early they are almost valueless by Christmas. The well-known useful

Cellini Pippin is one of the worst keepers if gathered too early, as the fruits sweat so badly. Though this is considered an early autumn variety it is much better when allowed to hang till the latter part of September. I am aware there is a certain amount of loss by dropping, and of course seasons must be considered, but I do not hesitate to say there is much greater loss when the fruit is stored too early, as a large portion decays and the other is so shrivelled that it is worthless. Some of the small late dessert fruits have a greater tendency to shrivel than others. This can be prevented by late storage. It is surprising how long a Cox's Orange will keep good if gathered late, and how much the flavour is improved by hanging. Again, the way the fruit is stored is another point worth more attention. Many varieties would be more valuable if gathered later and given a rough store. Those with ample floor space could often utilise spare cool places in preference to heated fruit rooms. Much may be done by going over the trees occasionally, gathering the ripest and not taking the whole crop all at once.—G. WYTHES.

The Japanese Wineberry.—My recent experience of this has modified my opinion of its merits. I now think that in the near future it will be generally cultivated as a profitable fruit. Some seedlings planted out in deep rich soil last year made rods 10 feet long, which were uninjured by the severe winter. These are now loaded with large sprays of fine, glossy red fruits, which when ripened in the sun are very pleasant, but on the shady side are somewhat tart, and they come in when all other bush fruits are over. A further recommendation is that birds appear to care nothing for them, which seems unaccountable; even those ravenous, all-devouring pests—blackbirds, that attack every fruit, leave them alone, while a heavy crop on a large specimen of Elæagnus edulis a few weeks ago was all cleared off by them before they were ripe, and the North American Wineberry was similarly stripped. Those having a suitable soil—I mean a deep rich one—would find a small plantation of it very useful, but it is not of much account in poor or shallow ground, the growth is weak and the fruits small and few. I have another species which I received from New York, called the Golden Japanese Mayberry, which appears quite distinct, with yellow fruit and neat foliage. It has not yet fruited with me—J. M., *Charmouth, Dorset.*

SHORT NOTES.—FRUIT.

Apple Red Astrachan.—Although not of high flavour, this Apple deserves to be more grown than it is at present. The tree as a bush does not require a large amount of space, it crops well, and for colour the fruit cannot be surpassed. As a market Apple it cannot fail to be a success, as its rich colour is sure to sell it.—E. M.

Apple Duchess of Oldenburg.—At one time I thought this Apple was going to be a failure in our heavy soil, as every tree exhibited signs of canker. By raising the roots near to the surface this has been got rid of. For market I regard this as an excellent Apple; its bright and attractive appearance cannot fail to sell it. For cooking it is quite in the front rank amongst early Apples.—E. M.

Apple Benoni.—I look most favourably upon this Apple for dessert. It is not often met with in private gardens. In appearance it much resembles King of the Pippins, except that it is not quite so high, being rather flatter. The fruit ripens about the middle of September, just at a time when dessert Apples are scarce. The tree is compact in its growth, requiring but little space to grow in, as its natural tendency is an upward one.—M.

Plum Diamond.—At p. 145 "J. C.," Newark, refers to the above, but makes a slight error in the spelling. I saw this variety in fine condition at the Edinburgh Plum congress in 1889. It is a splendid cooking Plum, and makes a good standard, but with me requires much thinning of the branches to be fruitful. I have seen it recommended for dessert when allowed to hang, but I do not advise it for that purpose. I quite agree with "J. C.'s" note as to its preserving qualities, and, given good culture, it attains a large size.—S. M.

CHRYSANTHEMUMS.

CHRYSANTHEMUMS IN RUSSIA.

THE article under the above heading in THE GARDEN (p. 133) is very interesting, and shows that if R. Katzer is a beginner in the culture of the Chrysanthemum, he has at least a knowledge of the different systems and much success, which prove that there is also a great love for the work. One of the surest signs of the hold the autumn flower has upon all is the fact that its cultivation is rapidly extending in other countries besides our own.

The chief desire of your correspondent appears to be to grow what are called fine blooms, but without having the plants run up to an ungainly height. R. Katzer's knowledge of the modes of "cutting down" is particularly full, and it is therefore unnecessary to dwell upon the point, only to emphasise the remark that it does not seem possible to obtain the largest flowers from any system except allowing each sort to assume its natural height. It is in regard to a selection of varieties that I offer to venture some advice. The greater number of the best varieties of quite recent years have a decidedly improved habit of growth. It is now possible to cultivate most excellent sorts that do not reach a height of above 4 feet, grown as in Russia from what would be with us late-struck cuttings and allowing a good space between each plant. This last is an important item; crowding has much to do with the excessive height of Chrysanthemums. A list of varieties will be added at the end of these notes.

Regarding the failure of Avalanche to produce perfect blossoms, this fine white variety is not so constant as formerly—whether through excessive propagation or over-cultivation, it may be both, I cannot say, but instances are plentiful of once handsome varieties becoming difficult of culture. Take Mme. Clemence Audiguier. Its ungainly height had something to do with many discarding it, yet many others failed to obtain that perfect lovely incurved form and taking shade of mauve colour which made it so popular for a few years. Belle Paule, Triomphe de la Rue des Châlets, Thunberg are also examples, and I am inclined to think the beautiful Viviand Morel and its sport, Charles Davis, will degenerate through their habit of forming premature flower-buds. I think the recently introduced Souvenir de Petite Amie a decided improvement. It is among the dwarfest of Chrysanthemums, and the pure white blooms are particularly handsome. Such whites as Mlle. Thérèse Rey and Niveum should be grown in the place of Puritan and Bouquet de Dame.

Your correspondent asks for a variety to replace Edouard Audiguier. Commandant Blusset has a very similar lively shade of carmine colour and long drooping petals; it is not so likely to suffer through "damp" as is the older, uncertain kind, and the habit of growth is much dwarfer. It is somewhat early, being at its best towards the end of October. The cause of the variety William Seward twisting its petals and thus exhibiting too much of the reverse shade of colour is through early bud-selection. I would suggest to R. Katzer that the buds of this strikingly handsome sort be taken later than has been usual. It is to my thinking by far the best very dark Chrysanthemum yet obtained.

The remarks upon the want of artistic training noticed with our prize-winning standard Chrysanthemum plants may well receive the attention of those who have the management of our exhibitions. It is a matter of wording in schedules. In private gardens one sometimes meets with informally trained heads upon clear stems, and handsome specimens they are, but in most cases at the shows close tying is too much *en evidence*. In the list given below the varieties are nearly all of the Japanese type. This class has been improved so rapidly, that gains in other types seem rare. It would, again, be unnecessary to include incurved sorts, dwarf-growing ones being almost unknown, and in considering the height, I have borne in mind the system of late striking adopted by your correspondent.

CHRYSANTHEMUMS FOR SEPTEMBER.

Mme. C. Desgrange, white, 2 feet; G. Wermig, yellow, 2 feet; Lady Fitzwygram, white, 2 feet; and M. G. Grunerwald, lilac, 18 inches.

VARIETIES AT THEIR BEST DURING OCTOBER.

Commandant Blusset, carmine, 3 feet; E. Molyneux, crimson and gold, 3 feet; Gaspard Boucharlat, orange-bronze, good standard; G. C. Schwabe, carmine-rose, 3 feet; Louise, blush white, 30 inches; Mlle. Lacroix, white, 4 feet; Mlle. Thérèse Rey, white, 4 feet; Mrs. E. S. Trafford, bronze-rose, 3 feet; President Borel, bright rose-purple, 4 feet; Ryecroft Glory, buff-yellow, good standard; Souvenir de Petite Amie, white, 30 inches; William Tricker, soft rose, 3 feet; and W. H. Lincoln, yellow, 3 feet.

FIRST-CLASS SORTS FOR NOVEMBER.

Anna Hartshorn, white, 4 feet, uncertain; Charles Davis, bronzy buff, 3 feet; Col. W. B. Smith, bronzy yellow, 4 feet; Duchess of York-yellow, 4 feet; Eda Prass, blush-pink, 3 feet; Florence Davis, white tinged green, 4 feet; Hamlet, cerise-salmon, good standard; John Shrimp, ton, crimson, 3 feet; Mme. Carnot, white, 4 feet; Mme. Ad. Chatin, white, incurved florets, 3 feet; Mlle. Marie Hoste, creamy white, 4 feet; M. Ch. Molin, bronze, 3 feet; M. Gruyer, pale rose, 4 feet; M. Pankoucke, yellow, 3 feet; Niveum, white, 4 feet, good for standard; Sunflower, yellow, 4 feet; Viviand Morel; and Viscountess Hambleton, blush-pink, 4 feet, uncertain.

H. SHOESMITH.

NEW HAIRY CHRYSANTHEMUMS FOR 1895.

IT seems scarcely possible to say much respecting this new section of Chrysanthemums, and the novelties for the present year call for very little comment. The interest in the race was first aroused by the advent of Mrs. Alpheus Hardy and sustained by the introduction of several other forms, but, taken as a whole, hairy varieties of the popular autumn flower must be regarded as a somewhat disappointing class. Prizes for them are offered in the N.C.S. schedule, and may be the means of bringing forward some good examples of horticultural skill at the next November show at the Aquarium; but to my taste the white varieties are the most useful, especially when grown freely for cut flowers. In this way medium-sized blooms, with their peculiar fluffy appearance, may be used with effect in bouquets or in vases with other subjects, but the varieties of purple or bronze shades are far from pleasing, as the tone of colour is often dirty or uncertain.

Having for several years placed on record the names of the novelties as they have come out, it seems to be useful to record those for the present year, but it will be seen they are far less numerous, and no doubt the little encouragement given of late is the cause of the number being so small. As florists' flowers, hairy Chrysanthemums are as yet a failure, and can only be regarded as mere curiosities.

Albinos (Crozy).—Pure white.

Dragon (Lacroix).—Broad petals, violet-brown-red, reverse old gold.

Mme. M. Marchand (Marchand).—Incurved; bright rose, tinted salmon in centre.

M. François Alottie (Reydellet).—Japanese; dark garnet-red and ochre yellow.

M. Joseph Allemand (Calvat).—Japanese incurved; dark lilac-rose.

Mrs. Higinbotham (Spaulding).—Japanese incurved; broad spreading blooms, bright pink; said to be one of the largest.

Mrs. W. J. Godfrey (Godfrey).—Broad incurved florets, colour white.

Oruba.—Clear light pink, slightly covered with hairs.

Perle d'Or (Bouchariat).—Incurved; Narcissus-yellow, reverse silver.

Triomphe (Crozy).—Long petals, salmon-rose, passing to pure salmon. C. HARMAN-PAYNE.

NOTES OF THE WEEK.

Physalis Franchetti.—This large edition of P. Alkekengi (the Winter Cherry), introduced by Messrs. J. Veitch and Sons, decidedly merits all that has been said in its favour. It appears to be earlier than its older ally, and the orange calyx which encloses the fruit is nearly twice as large as that of P. Alkekengi. The plant is much stronger and sturdier in every way. In the Cambridge Botanic Garden some of the calyces have already coloured, while those of P. Alkekengi are still quite green. It will prove exceedingly valuable for decoration. It is a native of Japan.—L.

Hibiscus syriacus.—I notice that your correspondent "E. M.," in alluding to this plant, mentions that it does not succeed on soil at all mixed with chalk. I happened, however, the other day to see two beautiful plants in a small plot only a few yards square in front of a cottage at Lewes, each of which was flowering most luxuriantly and formed a very striking picture. One was of a pale lilac colour and the other a pure white with a claret spot in the centre of each petal, and these were growing in a chalky soil. The whole subsoil of the district was chalk.—JOSEPH CHEAL.

Hunnemannia fumariæfolia.—This showy Mexican plant is now flowering profusely in the rock garden at Kew. The plant is about 2 feet high, the general habit of growth erect, the growth terminated by large, solitary, cup-shaped blossoms of a rich clear yellow. At first sight the flowers have somewhat the appearance of those of Eschscholtzia californica, though not so widely expanded when fully open. The plant is worthy of general cultivation, and by its distinct foliage and glistening yellow blossoms would make a showy bed for a long season. Plants are easily raised from seeds, which should be sown either late in autumn or quite early in the year. Liberal treatment is essential from the beginning.

Limnanthemum indicum.—In the Cambridge Botanic Gardens this is the most charming of recent additions to the collection of water plants. It is cultivated in the tropical aquarium, and there produces numerous floating leaves, bright green, nearly round, and resembling those of our British L. nymphæoides, but without the dark blotches. The flowers are white and the corollas, in which all the beauty lies, are exquisitely fimbriated and covered all over with white hairs. They are each about an inch across, and produced in clusters on what appears to be the petiole, a little below the leaf blade. For a small aquarium nothing is more charming than this. It is a native of the East Indies, though received from one of the nurserymen in the United States.—L.

Roses at Kew.—Roses contribute much to the present abundance of flowers to be seen at Kew, and we noticed that visitors appreciate them greatly. Two beds filled with Teas in two kinds, namely, Marie van Houtte and Comtesse Riza du Parc, were perfect pictures of colour when we saw them, and it would be wise to extend the Rose plantations on the same lines, planting only first-rate kinds. Another bed of Grace Darling shows this Rose as handsome and free as we ever see it, the strong summer shoots now crowned with great heads of fine blooms. Camoens also makes a gay bed, whilst among Monthlies, Mme. Laurette Messimy is specially charming. The good old Fellenberg fills a large bed and seems proof against mildew, which disfigures somewhat the two sorts previously mentioned, whilst as a Rose for grouping to make a gay display of colour, none surpass, and indeed very few equal, Fellenberg. A few H.P.'s are also flowering freely.

Rudbeckia speciosa.—Never have I seen this Coneflower flowering so profusely as at the present time. It is undoubtedly one of the finest of hardy border plants we have under certain conditions. Being a surface-rooting plant it quickly suffers from the want of moisture during a spell of dry weather if the situation is a dry one. In that case water must be freely given to obtain anything like a representative growth and afterwards a full crop of flower. By supplying moisture when required, my clumps of this plant are fully a yard across, the individual flower-stems 2 feet high. Planted alternately with Aster Amellus bessarabicus, the rich orange-yellow of the Rudbeckia contrasts favourably with the purple of the Aster.—E.

Apple Blenheim Orange.—With me for the first time in sixteen years the trees of this Apple are carrying a full crop. It has truly been a struggle on their part during that time to make headway against canker. By lifting them entirely and freely supplying them with liquid food the trees have made very good progress during the last five years, and are now almost free from canker. In our soil the trees grow fast enough during the summer, but by the spring-time nearly all of the growth made previously is killed by frost owing to its unripe condition. No Apple seems better fitted for growing as a standard than the Blenheim Orange. In spite of the difficulty of establishing the trees I should advise those making a new orchard to plant one or two of this Apple, keeping the roots on the surface when planting, and mounding them over with light soil with which wood ashes has been freely mixed.—M.

Martagon Lilies.—Occasionally one sees fine examples of plants in out-of-the-way gardens and places where little or no attention is given, and where the plants grow and flourish year by year uncared for and undisturbed. I came across some large clumps of Martagon Lilies quite recently in the hill district of Gloucestershire. The plants were evidently at home, as may be gathered from the dozen or more stout stems of which the clumps were composed. Of course, the plants had finished flowering, but the stems were there quite 5 feet high, and the petioles and seed-pods in numbers. Some of the stems had carried nearly fifty flowers, and, singularly enough, one of the largest clumps occupied a position in a narrow border at the southern end of a large outbuilding. Notwithstanding the great heat to which this particular clump must have been exposed during the season the foliage was quite fresh and good. This I believe in a great measure to be due to the roots being in contact with the rocks below, which in the district referred to are quite near the surface. The soil is a light fibrous loam, freely intermingled with small stones of the magnesium limestone of the district.—J. M.

Lapageria rosea.—Of this useful and free-flowering greenhouse climber I recently noted a very large example in the Birmingham Botanic Gardens. In the large conservatory, trained overhead from side to side and also extending many feet longitudinally, the plant in question formed a pleasing screen, as well as a welcome shade to some other plants on the side stages. Some idea may be gathered of its size when it is known that the principal growths numbered somewhere about five dozen. Those in the centre were trained erect, others at right and left were slightly inclining to their respective positions. In this simple, yet effective, way a very large portion of the roof was furnished, and crowding was out of the question. The roots were below the floor of the conservatory, and abundant evidence was at hand that this useful climber is by no means opposed to the uniformly cool conditions of such a position. Indeed, the plant prefers a cool spot at all times to root in, and in such is more easily managed. Nearly twenty-five years ago the late Mr. Robert Parker, in his nurseries at Tooting, grew a fine plant of the variety superba trained to the back wall of an unheated frame, protecting it in winter only with mats or a little loose Bracken. Under this treatment the plant made capital headway, the growths being very strong and the flowers exceedingly rich in colour.—E. J.

WATER PLANTS IN THE PARKS.

THE parks and gardens of large towns are more interesting than a few years ago. There are hardy plants worth looking at now, and it is not unusual to see them massed in a bold way, but little is done with the many beautiful water plants from our own streams and other lands. We were looking through several parks about London lately, and in not one instance was advantage taken of the water margins for the many lovely things that would thrive there. At Battersea some attempt is made in this direction, but not sufficient. This phase of English gardening must be thoroughly carried out and a proper selection of things made, not getting a lot of weedy Rushes and so forth, that choke other less vigorous plants. But the ugly flint or stone margins must be got rid of. At Dulwich a black looking flint is used, and gives one the impression that the water is as dirty as many a foul stream. Of course under such conditions the beautifying of the margin is impossible; one cannot plant in a stone edging, and in the pretty, well-planted Ravenscroft Park, near Hammersmith, stone is also used. It gives the "lake," as it is called, an artificial look, like one sees in many private gardens, where ugly fountain basins and such undesirable and unsightly features unfortunately exist.

In most parks there are opportunities for the growth of water plants, or those that love the moisture of the stream-side. First in importance is the Water Lily, and the mass of the common white kind, Nymphæa alba, in Battersea Park shows how much can be accomplished in this way. There is no want of variety. One could have such fine kinds as the broad pure white-flowered N. alba candidissima, rosea, varieties of the beautiful N. odorata, as the yellow-flowered N. o. sulphurea, and when they become more common, some of the splendid hybrids raised by M. Latour-Marliac, flowers that combine the beauties of the Eastern Water Lilies with those of northern climes—plants vigorous in growth, and with flowers of many glorious tints. The blossoms of some kinds measure nearly a foot across. People do not know of these lovely water flowers waiting for them—flowers that are not poor in growth or difficult to grow, but as hardy as our own white Water Lily and quickly increasing.

Apart from the Water Lilies, a wealth of native plants is at command. The Bog Bean (Menyanthes trifoliata), the Arrow-heads (Sagittaria), the Water Violet (Hottonia palustris), the Water Crowfoot (Ranunculus floribunda), the charming Bladderworts (Utricularia), Water Forget-me-not (Myosotis palustris), and a host of other things. A glorious native Buttercup is as rare almost in gardens as the Water Lily. We mean the Ranunculus Lingua, a noble yellow flower, with glaucous leafage and blossoms each about 2 inches across, the colour glistening yellow.

Many things are available for the margin of the water where the Siberian, Kæmpfer's, and yellow Water Irises are at home; the Globe Flowers (Trollius), the Loosestrife (Lythrum), and the Epilobium (Willow Herb), besides many other plants. Water gardening is new almost to many people, and we have yet to learn that it is as interesting and as beautiful as any other phase.

DRACÆNA AUSTRALIS AT TRESCO.

In many favoured Devon and Cornish valleys Dracæna australis may be found in a flourishing condition, for, provided the climate be suitable, it is not particular in the matter of soil. In no part of Great Britain, however, can it be seen to such advantage as in the Isles of Scilly, the Western Islands, which lie in the embrace of the Gulf stream and in the rays of the setting sun as one looks out across the Longships from Land's End. Of all these islands, Tresco is the one which is *par excellence* the home of the Dracæna. Tresco can be easily reached by boat from Hugh Town, St. Mary's, the metropolis of the Scillies.



An avenue of Dracæna australis in the gardens at Tresco Abbey. From a photograph by Lord Annesley.

In the gardens of Tresco Abbey are Dracænas, sometimes in avenues, as shown in the accompanying illustration, sometimes single giants standing alone with a carpeting of Poet's Narcissi in the spring or of Hydrangeas in the autumn, sometimes thrusting thick stems out of an undergrowth of flowering shrubs.

Here Palms expand their spreading fans in blissful oblivion of degrees of latitude, and one can hardly refrain from a regret while admiring their luxuriance that when, in the dark ages of the world, the Phœnicians gained the breaker-bound shores of the Cassiterides in their Cedar-built galleys, they were not greeted by the wavy leaves of the Palms from which they themselves derived their name; but at that period it is unlikely that anything but indigenous vegetation flourished in the Tin Islands. Here long lines of flowering Aloes lift their candelabra to the sky, reminding one of the journey along the "Flats" from Cape Town to the vineyard-land of Constantia. Here the polished smoothness of a Musa's leaf or the graceful fronds of a Tree Fern take one back to the West Indies—to Trinidad, and to Kingsley's adoration of the tropical foliage of that pearl of islands as expressed in his "At Last."

On every side is something to remark and to remember—tall specimens of Fourcroya longæva, with spikes over 20 feet in height; Australian Wattles, blooming as they do in the Riviera and in Algeria; Eucalypti, Camellia trees and Edwardsias, Rhododendrons of every shade of colour, Boronias and Correas.

In the spring acres of Narcissi diffuse their scent on the warm, salt breezes, and in the summer the gardens are ablaze with Mesembryanthemums, Geraniums, and Kalosanthes. Amongst the ancient tombs in the ruined abbey the Lily of the Valley blooms, and the Agapanthus lifts its tall umbels of blue and white blossoms within the ivied walls and arches. The New Zealand Flax grows in the Scilly Isles as rampantly as in its native habitat, and the South American Rheas stalk contentedly near the short Grass of the meadow beneath the abbey.

As, in the evening, the boat leisurely proceeds to St. Mary's on the homeward journey, the sound of the oars in the rowlocks echoes afar in the silence of the calm. The breasts of the sailing gulls reflect the blue-green of the sea, and a seal, noiselessly raising head and shoulders from the waters, gazes contemplatively at the intruders on its domain. There is yet time after landing to watch the sunset from Garrison Hill ere the tall Bishop's Light flashes its guardian rays over the Western Islands and the sleeping Atlantic. S. W. F.

Gardens in and around Norwich.—Norwich is known in literature as the "city of gardens," and it certainly merits the title. In no place have I ever seen more enthusiasm displayed in flower and window gardening. At this season a wealth of floral beauty may be seen, no matter in what direction one turns, the windows of many of the humbler cottages being quite miniature

greenhouses. Stocks, Asters and Gladioli are exceedingly well cultivated in the suburbs, and I was much pleased with the fine display of Verbenas I saw in one garden, the purple, white and scarlet varieties being equally well represented. The demand for jobbing gardeners during the summer and autumn months must be great, judging by the great number of well-kept villa gardens. I had the pleasure of visiting the fruit and vegetable market, which is undoubtedly one of the finest in the kingdom, both as regards convenience and the quantity and quality of the products offered for sale. One thing which always strikes me is the late supply of Raspberries. Whether these late fruits are obtained from the autumn-fruiting varieties, such as Belle de Fontenay, or from ordinary varieties, cut down in spring and induced to yield in autumn, I cannot say. Perhaps the cool moist nature of the climate has something to do with it. Currants, again (both Black and White), are offered in Norwich market much later than in most places, better prices of course being realised than during the ordinary Currant season, when gluts invariably occur.—J. C.

FLOWER GARDEN.

NOTES ON CHOICE HARDY PLANTS AT OFFINGTON.

VERY few gardens indeed contain such an extensive collection of rare hardy and half-hardy plants as is to be found at Offington, near the Sussex coast. Even the most casual observer when visiting the gardens cannot fail to notice that here no effort has been spared to collect all that is rare or choice among hardy plants or such as can be grown successfully by only slightly protecting them during winter. At the beginning of August I visited this most interesting garden and was conducted over it by the genial owner himself, who naturally takes a great pride in the many treasures in his possession.

Just before reaching the front door one passes a south wall so densely covered by vegetation, that scarcely a stone is visible. Here, in spite of the summer being far advanced, many choice and rare plants were still in bloom, amongst them being Indigofera floribunda, with its handsome racemes of rosy crimson flowers and nearly 10 feet high; the pink Tree Mallow (Lavatera Olbia), the deep claret-coloured Swainsonia atro-purpurea, and a fine plant of Hedysarum multijugum, the largest I have ever seen, measuring 10 feet high by 6 feet broad. This plant was planted against the wall just after its introduction, when it was considered a tender plant, but that it is perfectly hardy everywhere without the shelter of a wall has since repeatedly been proved. The same wall contains many choice things whose flowering season is past, but which nevertheless are most attractive on account of their foliage, such as Actinidia Kolomikta, described in THE GARDEN, August 24; Ozothamnus rosmarinifolius, the Australian Templetonia retusa, Viburnum suspensum, Actinidia arguta, Rosa moschata (10 feet high), Stranvæsia glaucescens (6 feet to 7 feet), a fine specimen of the Groundsell Tree (Baccharis halimifolia), measuring 12 feet by 10 feet, and most effective even now, although not in bloom. Vitis amurensis is also doing well. The house is covered with many interesting creepers, one of the most effective being Lonicera gigantea, with large panicles of yellow tubular flowers fully open at the time of my visit. A walled enclosure near the house has on the north side a fine specimen of Hydrangea scandens, and on the south side may be seen Acacia dealbata, Poinceana Gillesi, Edwardsia grandiflora, Diospyros Kaki, Vitis humulifolia, and Eriobotrya japonica. On the same wall I saw to my great surprise a most vigorous plant of Lagerstrœmia indica covering a space quite 10 feet wide and the whole height of the wall. This plant, known to most of us as requiring the temperature of an intermediate stove, has here been flourishing in the open for years, receiving only very slight protection in winter. A fine border plant in the same enclosure is Stevia Eupatoria, which forms a bush about 4 feet high by 3 feet in diameter, and bearing loose corymbs of white flowers.

At a little distance from the house and on the east side of the flower garden is a walled garden of considerable size, and devoted almost entirely to choice hardy plants. In the centre is a rockwork, which, though on an unpretentious scale, contains, nevertheless, some very choice plants in good condition, and among those still in bloom were Myosotis Welwitschi, a lovely late-flowering Forget-me-not, Pelargonium Endlicherianum, Convolvulus mauritanicus, Saxifraga Hirculus, Pterocephalus Parnassi, Hypericum Coris, Campanula isophylla alba, Horminum pyrenaicum, Chrysogonum virginianum, and many others. In the same rockwork a plant of the African Saintpaulia ionantha is planted out, but I very much doubt its proving hardy during winter even in that sheltered locality.

The borders of this walled garden contain many treasures. The Hydrangeas are magnificent specimens, and to these I devoted a special paragraph in THE GARDEN of August 24. The following choice plants which at the time of my visit were in full bloom have also been separately described in the same issue: Senecio Heritieri, Sutherlandia frutescens, Solanum arboreum, Campanula Vidali, Roscoea sikkimensis, Platycrater Sieboldi, and Polygonum filiforme variegatum. These, however, form only a very small proportion of the many choice things to be found. The deep yellow Cassia corymbosa is in full bloom and forms a spreading mass of glossy leaves which still enhances the beauty of the blossoms. The plant covers a wall quite 9 feet high; it stood the last severe winter, but for better protection its shoots had been tied into a bundle. Here also are to be seen Doryphera sassafras, Indigofera alba, and the beautifully variegated Acanthopanax spinosissima variegata. Lespedeza bicolor is just opening its pendulous racemes of rosy purple flowers, while Dolichos atrosanguineus has finished blooming and is displaying its large curiously-shaped seed-pods. Here I may also mention Pittosporum sinense, Veronica Lewisi, Symplocos cratægoides, Senecio Grayi, Hovenia dulcis, Ilex decidua, Asparagus verticillatus, and Anthyllis Barba-Jovis, all of which are very rarely met with in gardens and are looking exceedingly well.

A rocky border near a conservatory contains masses of the pretty annual Arnebia cornuta, and against the conservatory itself grows a fine specimen of Xanthoceras sorbifolia; this, by the way, is perfectly hardy throughout the southern counties and should be much more extensively grown. Not only are its flowers and foliage highly ornamental, but its fruits (about the size of Apples) are abundantly produced. In spite of the last severe winter it is fruiting profusely in Messrs. Veitch's grounds at Exeter, while the specimen at Offington here referred to is quite 14 feet high and covered with large clusters of fruit. Near the same conservatory grow fine specimens of Crinum Powelli. The large pink blossoms, at the time of my visit fully developed, are borne about eight flowers in an umbel and on stems 2 feet to 2½ feet in height.

Against a wall close by grows Mutisia decurrens, 8 feet high; Rosa gigantea, from Burmah; Ceanothus azureus and Pourthiæ villosa. Against the Orchid house grows a fine plant of Leptospermum stelligerum roseo-album, with its white and pink flowers, covering a space of about 6 feet by 4 feet; and Drimys Winteri, Phlomis floccosa and Desfontainea spinosa are also well represented.

In a broad border near the flower garden a most effective display is produced by masses of Castilleja indivisa. Why is not this exquisite showy flower more extensively grown? It is only an annual, it is true, but the large scarlet-crimson bracts, borne on stems about 18 inches high, are at present by far the showiest thing in the garden, whilst for cutting for indoor decoration few flowers can equal it in brightness of colour. Close by the flower garden is also a border specially devoted to choice hardy shrubs. Conspicuous among others are Quercus cornuta, with peculiar broad leathery leaves, Rosa microphylla, with its double red flowers, Aplopappus ericoides, Abutilon vitifolium in bloom, Daphniphyllum glaucescens, the scarce Comarum Salesovianum, Exochorda Alberti, and many others.

In another part of the gardens are Ostrowskia magnifica, Azalea rosæflora, and many other gems, but to give even a mere list of names alone of the plants in this garden would occupy more space than is here at my disposal. Suffice it, therefore, to say that the collection at Offington must rank amongst the foremost in England, and is certainly one of the most interesting I have ever seen.

Exeter. F. W. MEYER.

A rare Bindweed at Venice.—A friend tells me of a very beautiful Ipomæa now in bloom in the garden of the monks of the Armenian monastery on one of the islands near Venice. The flower is described as being 3 inches to 4 inches across, of a greenish white colour, and having a dark purple throat or eye. Can it be Ipomæa albivenia, an evergreen species from Algoa Bay? If any resident in Venice or any visitor there would kindly tell me the name of this fine species, or, better still, obtain seeds or roots of it, I should be much obliged.—F. W. BURBIDGE, *Trinity College Botanic Gardens, Dublin.*

Herbaceous Lobelias.—As there has during the last year been much correspondence on the subject of herbaceous Lobelias, I send herewith a spike grown with absolutely no protection during the winter. Two clumps were procured in the autumn of 1892 which have now been divided into twelve. They have been left in the bed all the year round and have had no mulching, even in the severest and most prolonged frosts. The spike I send you is, although all the flowers are not as yet expanded, over 4 feet 7 inches in height and 3 inches in circumference at the base, and shows that in some soils the practice of non-interference pays with these plants. In the low-lying ground in which the clumps in question are growing 21° of frost have been registered since they were planted.—S. W. F., *Torquay.*

Japan Anemone Lady Ardilaun.—As far as I have been able to judge, this is an improvement on the old form, but I am afraid that it is not likely to be so reliable. I got my plants from the raiser and put them out in good time. Early in July black spots appeared on the foliage and these gradually extended, so that the older leaves are much discoloured, thus lowering the vigour of the plants and marring their appearance. The spring was very hot and dry, and this may be the cause of the discoloration, although I kept the plants well watered. Some quite young plants that were set out on a north border are fresh and

green, so that it would really appear that this Anemone is liable to be affected by hot parching weather. In my case it cannot be soil, for close by, the variety Whirlwind is growing as freely and is as healthy as the type. Your readers who have grown this Anemone will have been able to form an estimate with respect to its value as a reliable garden flower, and I should like to know if anyone has had a similar experience to mine. It would be a pity if this and other new varieties should have an element of weakness in them, for it is the complete hardiness and freedom from disease that render the old forms of this flower so valuable for open-air decoration.—J. C. B.

THE RHUBARBS FOR USE AND BEAUTY.

To speak of the Rhubarb plants in many, if indeed not in the majority, of cases merely calls up a vision of the esculent species, Rheum



Rheum officinale in the garden at Castlewellan. From a photograph by Lord Annesley.

Rhaponticum, our common garden Rhubarb, and the "Pie Plant" of the United States. This plant originally came from, or at least is found wild in, Eastern Siberia. It is known to have been grown at Padua early in the seventeenth century, and from thence it was brought to England about 1628. The roots or rhizomes of this species and its varieties are cultivated for medicinal uses at Badicott, in Oxfordshire, but its main importance is as a vegetable substitute for fruit early in the year, many tons of its half-blanched leaf-stalks being forced and sent to market from December to April every season.

Of Rheum Rhaponticum, there are many garden forms, these doubtless being selections from seed which is freely produced if the tall flowering spikes of fleecy white flowers are allowed to develop. These varieties vary much in precocity as also in size and colour of the leaf-stalks. The best kinds are Tobolsk, an early variety good for forcing, and Elford, raised at Elford by Mr. Buck. This has a scarlet skin and red flesh, which retains its colour after cooking, and as it colours in the dark when forced, it is showy and sells well in the market. Mitchell's Royal Albert and Dancer's Early Scarlet, with Myatt's Linnæus are other good market varieties, as is also the giant kind known as Myatt's Victoria, which produces enormous petioles or leaf-stalks. The young flower-stalks when they first appear may be cut at 6 inches or so in length and can be boiled like Cabbage as an early green vegetable. It is not unlike Cabbage or greens in flavour, but has a slight and pleasant acidity all its own. The amount of Rhubarb grown in the vicinity of all large towns is marvellous. Near Leeds this culture is really an important industry, both as forced with manure or fire-heat and as grown in the open-air beds. Apart from its use as a fruit substitute in the way of puddings, pies or tarts, the stalks in autumn are often utilised for preserving in sugar with the addition of lemon juice and parings of lemon rind. A preserve made by mixing autumn Rhubarb and Blackberries or Rhubarb and Vegetable Marrows, or even with Apples, is by some housewives much appreciated.

That the dried or powdered rhizomes of several species of Rheum or Rhubarb form a valuable medicine has long been known. The species that yield the best supply may be mentioned in the order of their acknowledged importance: R. palmatum, first found growing wild in the province of Kansu, in the extreme north-west of China, from whence it has long been known that the best dried Rhubarb roots were imported; R. officinale (the fine species shown in our illustration), second only in importance, being a noble perennial herb found wild in Eastern Thibet near the Chinese frontier. Introduced, or rather first grown for economic purposes by the late Mr. D. Hanbury in 1873, it has since formed a crop of some considerable importance at Badicott, near Banbury, and its roots are medicinally employed. R. Rhaponticum is also grown at Badicott for its dried roots, but the great bulk of our medicinal Rhubarb is imported from India, Russia or China. Some 625,000 lbs. of Russian or Chinese roots are sent annually from Hankow to Shanghai, and the total import of roots into the United Kingdom is estimated at 350,000 lbs.

All the species of Rheum are very ornamental as grown in bold groups or masses in suitable positions. They thrive best in a deep, rich, moist and well-manured soil, and may be easily increased by seed or by division of the spreading rhizomes. The best time to divide or to replant all the kinds, useful or ornamental, is in April or May, or just as the growth naturally commences to develop, as thus moved carefully during wet weather, or if watered copiously, the plants suffer but little, if any, check, and grow all the more vigorously for their removal into fresh soil. The rarest and most remarkable of all the ornamental kinds is

R. NOBILE, found growing on rocks and terraces of mountains in Sikkim. Its tall flower-stems are clothed with soft yellow or primrose-coloured bracts, closely slated or imbricated over each other. This noble species has flowered in the Royal Botanic Gardens at Edinburgh, where many seedlings were raised some years ago.

R. EMODI is another giant species, with puberulent reddish stalks, gigantic flower-spikes, and broad leaf blades. It is from the Himalayas, and as well grown near to a pond or stream often is 10 feet high when in bloom.

R. acuminatum, from Sikkim, R. australe, from Nepaul, and R. undulatum, from Siberia, are other good kinds, but the form of R. palmatum called tanguticum, with incised leaves, purple-red beneath, and flower-stems 10 feet to 12 feet in height, is one of the best of all the ornamental kinds as boldly grown and grouped in deep rich light soil. As R. palmatum naturally extends as a wild species over a considerable area in Eastern and Northern Asia, it follows that it exhibits considerable variety, but all its seedling forms and phases are beautiful if well and strongly grown.

It is very curious that Rhubarb, although long grown in France for ornamental purposes in flower-beds or on lawns, is but rarely, if ever, used for cooking. One phase of Rhubarb beauty is the intense crimson colour of the long shoots and leaves as they push through the ground in early spring, followed by the towering plumes of white flowers, which again are succeeded by crimson-red panicles of fruit and gigantic foliage, that is almost as effective as that of the Chilian Gunneras.

F. W. BURBIDGE.

Single Dahlias for cutting.—With the possible exception of Cactus Dahlias on long stems one must admit that the singles form the best class of Dahlias for cutting; in fact, the wonderful freedom of flowering which is characteristic of them gives a marked advantage over any other type. Many persons dislike them, however, be-

cause they find that the petals often fall off soon after cutting. This is entirely due to the flowers not having been cut when young and fresh. The stage of the flower's expansion can be easily seen by observing the centre. If the disc has not shed its pollen the blossom will stand well and endure a very long journey unharmed. Those who complain of the fleeting nature of the single Dahlia and its consequent unsuitability for cutting will find that if the blooms are properly selected and only cut in the fresh state just described, they will be rewarded by seeing them last as well in water as the Cactus Dahlia. Again, if the flowers are cut when old they will be found to have faded and to have quite lost the brilliancy of colour seen on those recently expanded. They should also be cut early in the morning or late in the evening when the blooms are stiff and fresh and have recovered from the effects of a scorching sun.—H. A.

Buphthalmum salicifolium is a small, hardy, herbaceous perennial worthy of a place in every garden. It makes an excellent border plant, being neat and showy. It thrives well in ordinary garden soil, attaining a height of about 1 foot, and is smothered with its golden yellow flowers during the summer and autumn. The flower is very distinct, resembling that of Rudbeckia Newmanni, but slightly smaller. The black disc of the latter is also lacking, the disc in B. salicifolium being yellow in colour, thus giving a very distinct character to the flower. Altogether, this is an old plant which should certainly be more popular.—H.

VERBASCUM CHAIXI.

THOUGH the names and the characters of various species of Mullein are much confused, I think I may safely say that V. Chaixi (Villars) (see p. 98) never yet grew 8 feet high in any soil. Eight decimetres—about 2 feet 6 inches—is the extreme height assigned to V. Chaixi in Grenier and Godron's "Flore de France;" adding half as much again for luxuriance in cultivation, we may fix about 4 feet as the limit it is likely to attain in gardens. But, except once at Kew, I have never seen the true V. Chaixi (Villars) in cultivation in any English garden. Two plants often assume the name; one is V. Wierzbicki (Keuffel)—syn., V. vernale (Wierzbick)—which grows 8 feet high in my garden. The other is our native V. nigrum, which I have never seen more than 6 feet high, from 4 feet to 5 feet being a commoner height in cultivation. Why this latter plant, of which our native flora has good reason to be proud, is so often exhibited in nurseries under the name of a less ornamental exotic I can never understand. In "Flore de France" of Grenier and Godron we have the descriptions of V. nigrum and V. Chaixi given side by side, and except that V. Chaixi is one-third less in stature and size, it is difficult to pick out any obvious difference. In V. nigrum the stalk is angular, in V. Chaixi it is round. In V. nigrum the pedicel is twice as long as the calyx, in V. Chaixi it is equal in length. I do not assert that all the hundred examples of V. nigrum in my garden agree in having these distinctive characters, but I am quite certain that all of them, including the variety with white flowers, are the very plants or the offspring of the plants which were collected wild by me in the valley of the Thames; therefore, none of them is V. Chaixi. It is quite a mistake of botanists to call V. nigrum a biennial. It is as perennial as an Oriental Poppy or a Dandelion, and comes up in the same way from pieces of root left in the ground where it has been dug up.

The white-flowered variety which I found wild near Burnham Beeches is one of the most ornamental of hardy border plants, and if isolated comes true from seed. It is often called in nursery catalogues V. Chaixi album (syn., orientale), though E. Boissier, in his "Flora Orientalis," says that V. orientale is quite distinct from any European Mullein. In conclusion, I recommend the cultivation of Mulleins if only for the very ornamental hybrids they produce in gardens, hybrids often superior to either of the parents.

Edge Hall. C. WOLLEY-DOD.

SINGLE CACTUS DAHLIAS.

WHEN recently at Rothesay I had an opportunity of inspecting the extensive collection of Dahlias cultivated by Messrs. Dobbie and Co., the well-known seedsmen and florists, and gained some idea of the extent to which Dahlias are grown in the north. While the show and fancy varieties (with the pompon and single kinds) are largely grown, the single Cactus varieties most attracted my attention.

I may refer to the ordinary single Dahlias to say that if they are a declining floral force in the south they are still in great demand in the north, judging by the extent to which they are grown in Messrs. Dobbie's nursery. But they have to face a serious rivalry in the single Cactus type, which Messrs. Dobbie and Co. have done so much to improve; and they are so original in shape and novel in appearance and so well adapted to the wants of those who dislike flowers of more formal shape, that I venture to predict for them considerable popularity.

In setting forth their good qualities one of the leading ones is their habit of growth. Here they are in direct contrast to many of the varieties of the double Cactus type. How few of these there are the which, by reason of being free of bloom and of throwing their flowers well above their foliage, are adapted for garden decoration. Some of the most beautiful—delicata especially—are the worst offenders in this respect, though it should be stated that the more recent novelties do show some marked improvement in habit. The new single Cactus varieties are the very reverse of this, for they, with but very few exceptions, have fairly dwarf and compact habits of growth, they are singularly free of bloom, and throw their flowers well above the foliage. In addition, the blooms are generally on erect stems, and so are well adapted for indoor as well as outdoor decoration. For indoor purposes the flowers should be cut just before they are fully matured. In form and appearance the flowers have a striking yellow and circular disc and from six to eight petals, which curl back at the sides, become largely tubular, and so take a shape that, bereft of mere formal flatness, admirably fits them to be effective in floral decorations—in vases, on the mantelpiece, and in the many ways in which Dahlia blooms can be employed in the household. Seedlings are raised every year, so that the work of improvement may not lag. We are indebted to Mr. E. J. Lowe for the introduction of the type. He saw in it, if properly developed, possibilities of great usefulness. Messrs. Dobbie and Co. were the first to take the flower in hand, and they are rapidly improving it year by year. They have this season nearly 1000 plants of single Cactus Dahlias, including a margin of seedlings. A few of the most promising of the named varieties already in commerce will be found in Alice Lee, pink, paling to white at the base of the petals, very pretty indeed; Anne of Gierstein, peach, flushed with salmon and shaded with violet, very pleasing; Lady Rowena, sulphur and salmon-rose, a charming combination and very distinct; Marmion, glowing crimson-scarlet, very showy and distinct; Peveril, deep terra-cotta colour, shaded with dark cerise, very free; Argyle, deep maroon-crimson, which contrasts with the deep golden disc; Bruce, pale creamy lemon, a charming variety; Lochiel, cinnabar-red, the florets slightly incurved; Novar, crimson-purple, shaded to magenta, very good indeed; and Queen Mary, pure white, with pale yellow disc, very pleasing indeed, and admirable for cutting. These represent the very cream of the newer introductions.

Of older varieties, Earl of Ravenswood, old gold colour; Guy Mannering, creamy white and sulphur; Highland Mary, clear cardinal-red; Ivanhoe, bright lilac-rose with crimson band round the golden disc; Lucy Ashton, white, broad petalled, very pleasing; Meg Merrilies, clear yellow, very good; and Rob Roy, purple with violet shading, are all very attractive. There may be differences of opinion in relation to the ordinary single Dahlias as to whether the florets should recurve or be cupped; beyond this the only variation is in the colour and marking. But these single Cactus types admit of considerable variation in point of shape, in the breadth and length of the petals, some spreading themselves horizontally and some incurving, and so the tastes of many may find satisfaction.

It is always well at a time when any particular type of flower is in bloom to make selections of the best. This I have done in the case of the single Cactus Dahlias when I saw them in bloom and could note habits of growth. In this last respect the general characteristics are so good that there need be little misgiving in reference to the general adaptability of this type to effective garden decoration.—R. D.

—— This distinct type of Dahlia of recent introduction is very welcome to those in search of cut flowers for vases, table decoration, &c. For such purposes it is well adapted, and is better, on the whole, than any of the other sections of Dahlias. It is also a decided variation from any flower at present in general use for such purposes, and is characterised by such extreme lightness as to render it almost always possible to employ it for decoration. Its lack of formality should ensure for it a wide range of popularity. For garden decoration, too, it will be found useful, though the amount of display will not equal that given by the ordinary single Dahlia. The colours of the varieties already raised embrace a wide range. Of new varieties I may mention Alice Lee, a combination of white and pink, with twisted and incurved petals; Kenilworth, rose, streaked with white, with twisted petals; and Lady Rowena, sulphur, tipped with salmon-rose, good habit.—H.

Campanula isophylla alba.—Where a plant of trailing or drooping habit is required there is nothing to equal this. Commencing to flower quite early in the summer, it will keep up a succession for many weeks. Few things are so easily managed as this, and few, indeed, so well adapted to such a variety of circumstances. Suspended in the window of the cottager as a pot plant it is excellent, and the same may be said of it for the rockery, for window boxes, and for any and every position where trailing plants may be employed with advantage. Singularly enough, it thrives amazingly in either sunny or shady windows, though in the latter position the blossoms are rather longer lived. This is of little moment, however, as the flower-buds develop so rapidly that the plants keep up a continuous mass of blossom of the purest white. Only plant it in a fairly good soil, and with occasional watering success is ensured. While writing I have in my mind's eye some splendid masses of this plant in window boxes. There are some half dozen plants, two in each box. Individually the plants are nearly 18 inches across, of about equal size, and forming perfect sheets of bloom. To my knowledge these same plants have been in full flower for the past six weeks, and the hundreds of buds present promise a supply of bloom for a like period. Is it not rather surprising that any such plant

capable of a three months' display, with hundreds of blossoms expanded daily, should only be seen here and there? A plant of such easy culture as this, hardy and free flowering withal, has no equal among trailing subjects, and deserves extensive cultivation.—E. J.

Calystegia pubescens fl.-pl.—This is undoubtedly one of the most beautiful of all herbaceous climbing plants, and as a free-flowering, perfectly hardy, and vigorous growing subject it can be strongly recommended. The flowers are exceedingly double, of a soft and pleasing rose shade, and produced in great profusion on long trailing stems. There are many positions in the garden where its free use may give additional charm—such, for instance, as when planted at the foot of a hedge of Laurels or Holly. Over such things it may be allowed to ramble at will, or be given a trellis against the house, wall, or similar place. Planted on the higher parts of the rock garden and allowed to trail about at will, it is very pleasing. It is by no means particular as to soil, though as a rule it thrives best in a rather sunny spot. When once planted it should be left alone for several years. Indeed, it seems to prefer quite firm soil, for I remember seeing a large quantity some years ago springing from beneath a brick floor. The cottages were minus the usual bit of front garden and abutted on the street, and the above plant, springing from the paving of bricks, was climbing up strings against the cottage walls. Though not quite so vigorous as when growing under better conditions, it was, notwithstanding, growing and flowering quite freely. At the base the slender growths were protected by wire netting, a proof that its presence was appreciated.—E. J.

FLOWER GARDEN NOTES.

BEGONIAS.—These, to use a common phrase, have this season fairly surpassed themselves, the display where they have been well cared for being very fine and long-sustained. It is matter for congratulation that a wonderful improvement has been effected in and with bedding Begonias within the last few seasons, viz., the adoption of plants of more sturdy habit with erect or nearly erect flowers and thinner planting. For some years it seemed the aim to plant out as large-flowered varieties as could possibly be obtained, with the result that one very seldom saw the beauty of the flowers, blooms and flower-spikes being, as a rule, nearly prostrate in the dust or hidden by the foliage, and even if matters were not quite so bad as this the drooping habit of the flower prevented any more being seen of it than the outside of the petals. Under such circumstances a bed of thoroughly good scarlet or pink Pelargoniums was infinitely brighter than the Begonias, and there was the danger that the latter would gradually decline in favour. The introduction, however, of such varieties as Worthiana and ascotensis into the summer bedding proved what had hitherto been wanting in Begonias, and the skill of the hybridiser quickly gave us in the common tuberous section a type with erect flowers that are produced in great profusion, retaining, too, in the plant the fine bold foliage and sturdy habit. Two noted this year that are respectively deep orange-scarlet and cerise-scarlet, the latter somewhat the shade of Guillion Mangilli Pelargonium, are specially fine plants quite 2 feet in height and slightly over this in diameter, well clothed with foliage and simply studded with erect flowers borne well aloft on firm, strong flower-stalks. The habit of planting very thickly is now, happily, almost discarded, sufficient room being given to allow for the proper development of individual plants and to show a dwarf carpet between that will form a pleasing contrast to the Begonia; even a little soil visible here and there is better than a close huddling together of the plants. For the colours above named a good carpet is to be found in the golden Mesembryanthemum, Koniga variegata, or some of the white or light-coloured Tufted Pansies.

UNCOMMON BEDDING PLANTS.—The introduction of Plumbago capensis into outdoor flower gardening is of comparatively recent date, but it has now become a decided favourite, large plants on a dwarfer carpet, presenting possibly the most effective display. Like specimen plants of Heliotrope, Fuchsias and Pelargoniums, the Plumbago should get cool treatment for a month or six weeks prior to planting out. I renewed acquaintance the other day with an old friend in the shape of Coprosma Baueriana variegata, large pyramids 6 feet in height and between 3 feet and 4 feet in diameter at the base; they were plunged in a large bed which had been previously partially filled with a deep crimson Antirrhinum; this was flowering remarkably well and set off the golden pyramids to admirable advantage. Humea elegans is an old favourite, and I remember very fine specimens in the flower garden twenty-five years ago. Lately, however, it seems to have declined in favour, possibly owing to the fact that a difficulty is often experienced in raising the plants. Thoroughly good seed that will come well is not easily obtainable. Late in the season when the long spikes of seed are swaying gently in the breeze it is a very attractive plant. Occasional plants make a nice break to beds of dwarf Pelargoniums, only the latter must be kept well away from the Humeas that the bottom flower-spikes may have room to develop and be preserved intact. Seedling Humeas will now be nice little stuff, and may be transferred singly to very small pots or pricked out into seed pans or boxes, shifting again rather later in the season. It is not advisable to have the plants too large for wintering; 4-inch or at the most 5-inch pots will be quite large enough, and they can get the last shift with the approach of brighter days at the beginning of another season. When the small pots get well filled with roots it is advisable to give weak liquid manure twice a week, the Humea when fairly well established being a gross feeder. Writing of the Humea as a pot plant in connection with dwarfer subjects reminds me that I have found two hardy plants—Statice latifolia and S. Gmelini—very acceptable for a similar purpose in connection with the darker Violas, such as Mrs. Bellamy, Crimson King or J. B. Ridding. The value of the Sea Lavenders in different styles of flower garden planting is becoming better known with each succeeding year; they are, however, as yet uncommon bedding plants. I saw an old favourite the other day in Maurandya Barclayana, a very fine plant as a trailer for raised beds. Planted close to the piles that support the soil and allowed to droop over them it blooms with wonderful profusion, and the colour is one not often met with in outdoor flowers. A similar position is just the place for Convolvulus tricolor in variety, a very beautiful annual, throwing blooms of soft and varied shades, and with a well-sustained flowering season. I should like, in passing, to direct the attention of GARDEN readers that are skilful with brush and palette to this variety of Convolvulus; some of the loveliest shades of colour imaginable are obtainable from a good strain of seed. In the same garden where the Maurandya above-mentioned was flourishing I came across the old Cuphea platycentra as a broad edging respectively to Centaurea ragusina and to a light-coloured Heliotrope. Although not particularly striking in appearance, the Cuphea makes an admirable carpet, and the bushy plants are simply covered with the peculiarly shaped flowers. As a bed out of the ordinary run, unique and at once striking and effective, let me recommend a combination of Yucca filamentosa and Lobelia cardinalis, planted respectively in bold groups. If this is done on a big scale it will be a very pleasing contrast, and may be specially recommended for a sloping lawn when there is, as a rule, a distant view of the bed.

TUFTED PANSIES.—In noting on page 153 a new sort certificated at Birmingham, the writer makes a very pertinent remark as to the name Tufted Pansies. Personally, I should like to see the whole section grouped under the name of perpetual or bedding Pansies, as may be deemed the more appropriate. A word in explanation, still following the line taken on page 153. I have a splendid white that starts flowering with the earliest, and continues with no break (given proper attention) right away until October. By no stretch of the imagination can this be called a Tufted Pansy, and yet it is far more serviceable to me than Violetta, possibly the best of the true tufted section. Again, one of our best beds has been an association of a carpet of Countess of Kintore Viola with bold groups of Pentstemons; the Viola in question, as everyone must admit, is certainly not a Tufted Pansy, but one that has a splendidly sustained season if the shoots are lightly pegged and dying blooms removed. I venture to make the suggestion above-named not only as to existing varieties, but in view of the fact that many new kinds are now annually forthcoming which should either be grouped together under one name, or sent out respectively as tufted or perpetual-flowering Pansies.

PINKS.—There is a grand strike of these favourite flowers, and where the ground is in readiness for them they could be planted out at any time. As usual the old Pheasant-eyed variety has outstripped its companions in growth, and the cuttings of this sort inserted about the middle of July are large bushy plants. It will be as well when planting out to remember that the heavy-flowered varieties, as one or two of the whites and Ernest Ladhams, are likely to require support if the weather prove stormy and wet during the time they are in flower. It is not at all a bad plan to plant such sorts with the Carnations; the display of flower on the beds is thereby considerably lengthened, and the Pinks might be propagated with the Carnations, and in a similar manner. Ernest Ladhams continues to throw occasional flowers very good in quality; this in September is another point in favour of this very excellent Pink. In connection with the better varieties of Pinks I should like to note that they make very useful pot plants, and may be employed in this way to a somewhat considerable extent, especially in those places where there is a large demand for flowers, and the accommodation for those of a tender nature is limited. Nice strong layers or cuttings that have plenty of roots can be potted up at once, using a compost of three parts open loam to one of horse droppings, well rubbed to pieces, and a dash of sand. The pots can stand all through the winter in a cold frame on a good ash bottom, and should be sufficiently wide apart, so that on the approach of severe frost the intervening space can be packed in with any dry Fern, Cocoa-nut refuse, or coal ashes; the said packing material may also stand an inch or so in thickness on the surface of the pots. E. BURRELL.

Claremont.

ORCHIDS.

CYPRIPEDIUMS.

WHETHER considered botanically or from an ordinary point of view, this is the most distinct genus of Orchids in existence. It is easy to confound many of the genera, but anyone may tell a Cypripedium at a glance though not versed much in Orchids. No other has lent itself so readily to the skill of the hybridist, the number of crosses effected among the different species being simply overwhelming. In such a host of plants naturally enough there are a few that can only be tolerated on account of their botanical interest, being sombre and dull in colouring and not to be compared with an ordinary greenhouse plant for beauty. On the other hand, there are in the genus some of the most magnificent and handsome flowers imaginable. Many are almost priceless, while others are common enough to be within the reach of all, some of the earlier but beautiful hybrids now being obtainable at very low prices. The genus is very widely distributed over considerable portions o

both hemispheres, some from the colder regions, but the majority of the kinds from tropical countries. C. Calceolus, the English Lady's Slipper, is the species upon which the genus was founded many years ago by Linnæus, and although practically extinct as a wild plant, this is still cultivated in collections of hardy Orchids. The pouch or lip from which this obviously takes its popular name is the distinguishing characteristic of the genus, while the dorsal sepal in most instances is also very conspicuous. But notwithstanding this there is a very great variety both in the shape and size of the flowers. For instance, the bellatulum group, with their segments all of about the same size, differ widely from the caudatum section with smallish sepals and petals elongated to a surprising extent, while the tiny flowers of C. Schlimi are of a totally different style of beauty from those of the beautiful C. Stonei or Morganiæ. Between these there are innumerable forms that to describe fully would need a volume, to say nothing of the many hardy herbaceous kinds natives of the temperate regions. Many of the tropical kinds are naturally epiphytal, but under cultivation they are found to thrive best with a fairly substantial compost. The culture of C. bellatulum and its allies has been recently referred to in THE GARDEN, and the following is not intended to apply to these. The majority of the Indian and American kinds are free-rooting vigorous plants. When first imported the greater portion of the roots will often be found to be dead, or nearly so, and the first consideration will be to induce the formation of new ones. Various modes of effecting this have been recommended. The best plan I have tried is to lay the plants out for a week or two upon a moist stage in a warm house, as this freshens up the foliage considerably. After this they are potted up into as small pots as possible, using clean crocks and keeping the base of the plant a little above the rims. They are then plunged in Moss or else a very thin surfacing is given over the crocks and lightly dewed overhead daily. Any that are naturally weak growers and difficult to establish are better without the Sphagnum, for a time at least, keeping the crocks moist by watering several times daily. As soon as roots are seen to be starting a little Moss must, however, be given, while the stronger growers may be lightly surfaced over with peat and Sphagnum mixed. This will usually suffice for the first year, and if during this time the plants produce roots plentifully, they are then, comparatively speaking, safe. Early in the succeeding spring they must be carefully repotted, avoiding snapping the roots or disturbing them more than is absolutely necessary. The strongest growers may be given a compost consisting of equal parts of good fibrous loam, peat, and chopped Sphagnum, with a plentiful admixture of charcoal or potsherds, but no sand, for although this material continues to be recommended, I have never found any but harm accrue to the plants from its use. Smaller or weaker growers will be better for the first few seasons at least without any loam, using instead equal parts of peat and Sphagnum. The drainage in all cases must be carefully attended to, filling the pots to at least half their depth and covering this with a layer of the rough portions of the Sphagnum Moss. At subsequent repottings cut away all decayed roots with a sharp knife, and pick out any of the old soil that has become sour and close. If through any cause, such as a waterlogged compost or over-watering, the plants get into a really bad state at the roots, they should be shaken clean out of the compost and all adhering parts washed away. Carefully preserve what few roots may be still alive, and after thoroughly washing and drying them, treat them as advised for newly-imported plants, excepting as to laying them out, which will not usually be necessary. The early spring months should be chosen for this operation, but rather than leave them for any length of time in such condition, I should not hesitate to repot at any season.

All the tufted evergreen Cypripedes may be safely propagated by division, using a thin, keen blade to separate the rhizome and retaining a few roots to each piece. They all delight in a shady, moist atmosphere while growing, and do not like much watering overhead. At the roots, on the other hand, they can hardly be overwatered when healthy and in full growth. During winter less is needed, but even then they require much more than the majority of Orchids, and no drying off is at any time to be recommended. The temperature required by the various species differs a good deal, although many of the kinds are not in the least fastidious in this respect, and this will be best referred to under the headings of the separate species n ted from time to time. Amateurs commencing their culture cannot do better than grow the cheaper ordinary kinds at first, taking up the culture of the rarer and more difficult species after some experience has been gained. They will find in them an interesting and beautiful class of plants that produce a return in flower more than proportionate to the little trouble that is needed to grow them well. H. R.

Cattleya Luddemanniana.—This is a member of the labiata group of autumn flowering species, and though not perhaps so good as C. Mossiæ, it is nevertheless a useful plant. The contour of the blossoms is somewhat stiffer than in most others, and this is especially noticeable in the smaller forms. The ground colour of the flowers is light purplish-rose, the lip having a rich purple blotch in front and two blotches of creamy white or yellow in the throat. Like all that flower upon the current year's growth, C. Luddemanniana must be kept dormant after flowering, and if this is properly attended to, there will not be much cause for complaint as to its not blooming freely.

Lælia Dayana.—Although sometimes grown in a cool house, it is not advisable to keep newly-imported plants or even semi-established ones too cool. Possibly after a year or two in this country they are less liable to insect attacks if grown with Odontoglots, but I have never seen the growths so good as when placed in the Cattleya house. A nice form of this I saw recently had flowers of a rich magenta-purple, each about 4½ inches across. It is a dwarf growing plant, usually flowering later in the season.

Stanhopea grandiflora.—The pure white, sweetly-scented flowers of this Orchid are always welcome, and one only wishes they were not so fleeting. It is probably the most free-flowering species in the genus, old and well-established specimens pushing flowers in rapid succession all through the summer and autumn months. Like all in the genus, it delights in a strong heat provided the atmospheric moisture is plentiful. If allowed to get dry and parched, red spider and its attendant evils are soon in evidence. The flowers occur on short pendulous scapes, about three or four on each. It is a native of Trinidad.

Oncidium Gardneri.—This is one of the prettiest of the crispum section and a favourite species wherever grown. The flower-spikes are large and much branched and each bears a number of the pretty and sweetly-scented flowers. The sepals and petals are brown, edged and spotted with yellow, and the large three-lobed lip is bright yellow with marginal spots of chestnut-brown. It is a native of the Organ Mountains, in Brazil, and was introduced in 1843. This thrives well in shallow pans or on rafts suspended from the roof either at the cool end of the Cattleya house or with the warmest section of Odontoglossums.—R.

Pilumna fragrans.—When happily situated this is one of the most useful and free-flowering Orchids in existence, never failing to give a good account of itself—at least once and frequently twice in a season. It may be grown in the cool house, but the pseudo-bulbs are larger and the flowers finer if given a little more heat, or such a temperature as Odontoglossum grande delights in. The best receptacles for the plants are well-drained clean pots, and the compost may consist of about equal parts of peat and Sphagnum with a few pieces of charcoal. It must be firmly potted and the base of the pseudo-bulbs kept well above the rim. While growing freely abundance of water must be given, and while at rest the supply must be ample to keep the bulbs plump. The flowers are produced in loose panicles of about six or seven, the sepals and petals long and twisted, white, the lip white with a dense yellow eye, a good deal like that of Dipladenia boliviensis. The flowers last about four or five weeks in good condition. P. fragrans is a native of New Grenada, whence it was introduced in 1856.

GARDEN FLORA.

PLATE 1031.

SARRACENIAS.

(WITH A COLOURED PLATE OF S. FLAVA.*)

SARRACENIAS do not require any more heat than is obtainable in an ordinary glass house, where fire-heat is used only in very cold weather, and they may therefore be considered as plants that may be grown in almost every garden of any size. In Sarracenias we have a double attraction, viz., in the form of their pitcher-like leaves, which are often beautifully variegated, and in the large and handsome flowers which they produce very freely in the early summer months. These two characters are exceedingly well shown in the accompanying plate. In the colours of the flowers and in the form and size of the pitchers there is very considerable variety amongst Sarracenias, and they are certainly amongst the most attractive of plants when grown in a corner or small house by themselves, as, for instance, at Kew, Glasnevin, and in several of the London nurseries.

There are six true species of Sarracenia known, all of them natives of the Atlantic States of North America. Darlingtonia californica, a closely allied monotypic genus, is, as the name denotes, a native of California, and the very remarkable Heliamphora nutans, also a near ally to Sarracenia, is limited to the Roraima Mountain, in British Guiana. Although frequently attempted, no one has succeeded in obtaining a cross between Sarracenia and Darlingtonia, and it is very likely that some functional barrier will prevent this from ever being accomplished.

S. PURPUREA is the best known, the longest cultivated, and the hardiest of the species; it has short horn-shaped, inflated pitchers of a deep blood colour when mature, the flap-like lid upright, so that rain easily falls into the pitchers. When well managed this sturdy plant forms a very attractive specimen. In a 10-inch pot a plant with at least thirty large crimson pitchers upon it has been grown, and in the spring these were accompanied by numerous large red-purple flowers.

S. DRUMMONDI has erect trumpet-shaped pitchers 2 feet or more long, the lid broad and

* Drawn for THE GARDEN in Messrs. Sander's nursery at St. Albans by H. G. Moon. Lithographed and printed by Guillaume Severeyns.



wavy, the whole of the upper part being creamy white with a thick reticulation of reddish and green veins; the flowers are 4 inches in diameter and have dull red sepals, maroon-coloured petals, and the stigma, which is 3½ inches across, greenish red. It is still one of the most beautiful of all Sarracenias.

S. RUBRA.—In this the pitchers are erect, 1½ feet to 2 feet high, with a tail-pointed, inflexed lid; they are green with deep red veins in the upper part, where in autumn they assume a uniform vinous colour. The flowers are 3 inches across and coloured reddish brown.

S. FLAVA.—This is the tallest-growing kind. Pitchers of it which measured 3 feet 3 inches in length have been seen; they are erect, trumpet-shaped, green, the veins dark green (in some varieties red), and the lid, which is sometimes yellowish, is upright with the sides reflexed and the point tailed. The flowers, which are large, have a powerful odour, and are coloured a bright canary yellow. Some of the varieties of this, such as, for instance, ornata and atrosanguinea, are great improvements on the type, the former being very large and wide-mouthed in the pitcher; atrosanguinea, as the name implies, is remarkable for the deep red of its veins and lid.

S. PSITTACINA is a small plant with small horizontal pitchers, which have a broad wing like a knife-blade, a hood-like lid, and the apex of the pitcher so twisted as to give it the appearance of a parrot's head, hence the name. The almost transparent sides of the pitchers, with their numerous blotches of dark red, are pretty characters in this plant.

S. VARIOLARIS is the least attractive kind, and is not so easily kept in health as the others. It has pitchers 1 foot high, with a broad wing and a hood-like lid, and they are green with a little yellow mottling about the mouth. The flowers are large and pale primrose-coloured.

In several of the species there is considerable variation in the size and markings of the pitchers, but they all bear the stamp of their respective types, the descriptions of which about cover the characters of the varieties.

We come now to the hybrid sorts. The last species introduced was S. psittacina, which Messrs. Veitch distributed in 1866, and from that time till 1874 no additions to the genus were made. In 1866 it was stated that seedling Sarracenias were unknown in this country. It remained for the late Dr. Moore, of Glasnevin, to not only succeed in raising plants from seeds, but also to obtain the first hybrid Sarracenia, which he exhibited in 1874, and which was named

S. MOOREANA. The parents of this beautiful plant were S. Drummondi and S. flava, and the characters of the two are blended in the offspring in the most perfect manner. The pitchers are large and richly veined, and the flowers are each about 3 inches across, their colour being crimson, pink, and yellow.

S. POPEI.—This was obtained at Glasnevin by crossing S. flava with S. rubra. It is most remarkable because of its flowers, which are 4 inches across, and coloured rich velvety crimson, with yellow margins, and pink inside the petals.

S. STEVENSI was obtained from S. purpurea crossed with S. flava, and originated at Trentham, under the care of the late Mr. Stevens. It is one of the finest of all Side-saddle flowers, growing into very large specimens, and holding its pitchers perfect much longer than any other kind. The pitchers are nearly 2 feet long, erect, broad, with a prominent wing, a large, almost round, lid, and coloured green with a reticulating nervation of brownish red. The flowers in this are also exceptional, being as much as 6 inches across, the sepals green with brown edges, the petals crimson outside, cream-coloured within, and the style, which is 3 inches across, bright green.

S. WILLIAMSI is an imported plant, and is supposed to have sprung from S. purpurea and S. flava in a wild state. The pitchers are shorter than in S. Stevensi, but similar to those of that variety in shape; whilst the flowers are 5 inches across and coloured reddish brown on the sepals, rosy lilac on the long petals, the large disc of the style being green. The contrast between these colours is peculiarly attractive.

S. PATERSONI was raised by Dr. Paterson, of Bridge of Allan, and is a cross between S. purpurea and S. flava. Except in the rich deep crimson colour of the upper part of the pitchers, there is little difference between this and S. Stevensi.

S. CHELSONI.—The parents of this were S. purpurea and S. rubra, and it was raised by the Messrs. Veitch in 1877. The pitchers are each about 1 foot long, broad, as in S. purpurea, almost erect, and coloured a rich claret purple. The flowers are 4 inches across and purplish brown in colour. It is a handsome kind, and may be described as an elongated and improved S. purpurea.



Sarracenia variolaris.

S. MELANORRHODA, also raised by Messrs. Veitch, was obtained from S. purpurea crossed with the fine hybrid Stevensi. In habit it is like S. purpurea, the pitchers being 6 inches long, with a deep wing; colour rich blood-red.

S. FORMOSA, a hybrid from S. psittacina crossed with S. variolaris, has pitchers 6 inches high and coloured green, with reddish spots and veins. The pitcher is covered by the lid, as in S. psittacina, which it also resembles in the habit of the pitchers being almost horizontal.

S. COURTI was raised by the late Mr. Court, in Messrs. Veitch's establishment, and is a cross between S. purpurea and S. psittacina. It has decumbent pitchers, about 8 inches long, and coloured a rich deep crimson, their form being intermediate between that of the two parents.

S. Swaniana, from S. purpurea and S. variolaris; S. Wrigleyana, from S. psittacina and S. Drummondi; S. Tolliana and S. Wilsoniana, from S. purpurea and S. flava; S. Mitchelliana, from S. Drummondi and S. purpurea; S. excellens, from S. Drummondi and S. variolaris; S. Maddisoniana, of the same parentage as S. formosa, are hybrids, with characters partaking more or less of both parents, and are all handsome. For descriptions of these, and also of several kinds not so well known, the reader may refer to THE GARDEN, vol. xxviii., p. 218.

B.

THE WEEK'S WORK.

HARDY FRUITS.

PEACHES AND NECTARINES.—The fruits having been cleared from Early York, Early Alfred and others, much of the old fruiting wood can be cut away to get the wood matured for next season's crop, giving the new growth ample space. If attention is paid to extension of the new wood and removal of old, the trees being allowed to grow freely, they last many years. The American varieties, to get the best results, require free extension and well-matured wood. By removal of old bearing wood now there will be less pruning in the spring, and the wood if at all dirty may be better cleansed. The trees, owing to late rains, are making much growth, and unless the knife is used freely there will be soft, unripened wood and want of fruit buds. On late trees the fruit just ripening may be hastened by pinching or removing the leaves and small shoots covering the fruits. See that the trees are not deficient of moisture, as though the rainfall may be heavy, with a wide coping it may not reach the roots of large trees. Later trees should be fed with liquid manure, the growth regulated, and the fruits brought to the light to get high colour. Trees that are not worth keeping, owing to canker or other disease, should be marked and those to replace them planted early, as when the trees are got into their growing quarters early in November there will be better growth next season. Among early kinds, Alexander, Amsden June, Condor, Early Silver and Hale's Early are all good on open walls. For midseason there is a large selection, and such kinds as Noblesse, Royal George, Large Early Mignonne, Dymond, Bellegarde, Crimson Galande and Dr. Hogg are the best; whilst for late fruits Barrington is one of the best, with such kinds as Grosse Mignonne, Belle de Doue, Late Admirable, Princess of Wales and Sea Eagle. Of Nectarines, Rivers' New Early this season promises well, and the earlier introductions, such as Dryden, Humboldt and Spencer, are fruiting well. Lord Napier is all one can desire and may be grown in any soil, being the best all-round variety we have.

FIGS ON OPEN WALLS.—The severe winter having much crippled the trees, every means must now be taken to ripen the new growth. The knife should be used freely, cutting away small, weak shoots to prevent crowding, and nailing up next season's fruiting wood close to the wall to get all the warmth possible, the terminal or main branches being given every chance to develop, not shortening in any way and giving them ample space. Any old branches that have failed to break should now be removed, cutting them clean out. Shoots coming up direct from the base should be encouraged to grow freely. For new wood for extension select a few strong leaders in preference to medium-sized shoots. It is well to remove any fruits now showing, thus giving the new growths greater strength. Although fruits show freely at this season they will not winter on the trees, and should not be left, as the fruit next year will be produced from the well-ripened points of this year's wood. Growth will be later than usual owing to the late start the trees made, and will need more attention to get it well matured. Should there be any failures from old trees hav-

ing been killed, now is a good time to select strong young trees in pots, choosing those with a few strong leaders, but deferring planting till the spring. Such varieties as Brown Turkey and White Marseilles are the best.

CHERRIES.—Large trees should not suffer from want of moisture. Although top-growth is not active and should not be encouraged, the trees soon suffer if checked by drought, and this is the precursor of gumming and canker. Small trees inclined to make strong leaders and little fruiting wood and spurs require special treatment to check gross growth, and I prefer lifting gross, strong trees, preserving all young fibrous root growths and cutting back the strong roots. By the term lifting I do not mean it is necessary to entirely remove the tree, but to get well under it, and if necessary raise it. If done with care the leaves will not flag and the wood will not shrivel in any way. There will be a fair crop of fruit next season.

APRICOTS require much the same treatment as Cherries. The fruit having been gathered much earlier this season than usual, growth is well advanced and the new wood is firm. Young trees are apt to grow too strongly, especially in rich borders, and such trees never fruit freely. What fruit does mature is not good, the fruit having split stones and other defects. With young trees in the above state means must be taken to check the unprofitable growth, and there is no better time than the end of September or early next month to lift. This year, owing to the favourable summer, the growth is much more matured than in some seasons. It is not well to lift when the wood is soft, or shrivelling, which is to be avoided, would follow. Trees in light soil and on warm aspects lift better at the end of September than later, the only additional work being to damp overhead freely every afternoon in bright weather or shade for a short time if necessary. In replanting avoid manures of any kind. With gross trees rich or fresh soil may not be desirable, but such aids as burnt garden refuse, wood ashes, or in soil deficient of lime, old mortar rubble will promote a short-jointed growth and plenty of fruit spurs.

ROOT-PRUNING APRICOTS.—The healthiest trees are those with roots close to the surface, and to get these it is at times necessary to cut back deep-rooting coarse roots. Extra large trees may be what is termed half root-pruned—that is, half the tree done this season, the other next autumn. Should the trees operated on be poor or show signs of decay, better material, such as bone-meal or a good fertiliser, should be given the roots.

G. WYTHES.

THE KITCHEN GARDEN.

THINNING AUTUMN ONIONS.—Early sowings of such sorts as White Lisbon, The Queen, and White Leviathan will now be fit for thinning. The sooner this is done the better, especially where as advised a row or two extra was sown for use in salads. The latter may remain unthinned at any rate for the present. On hard, dry ground and in absence of rain a good soaking of water should be given the day previous to thinning, or many of the bulbs will be left in the ground, which is an evil. Allow for going over the bed a second time, as one is never quite safe from attacks of the dreaded maggot. Give another moderate broadcast sprinkling of soot, using the Dutch hoe afterwards. Younger lots should also be hoed between. If the storing of ripened Tripoli bulbs is not yet complete, let it be done at once, as they lose much of their weight and quality by lying too long exposed to sun and drying winds. In forward localities the earliest lots of spring-sown Onions will be ready for pulling up. Some gardeners still follow the old plan of placing them in large flat hampers, so that that they can be removed under cover at night or during heavy rains, and doubtless where time can be spared this is advantageous, it favouring a speedy and perfect maturity. My plan is first of all to throw the bulbs from one half the plot on to the other, then clean off all weeds, afterwards treating the other half in a similar manner, and finally spreading the Onions evenly over the whole area. This is far better than leaving them amongst weeds and rubbish, which hold the dews and moisture and prevent a free circulation of air amongst the bulbs. The thick-necked and otherwise deformed portion of the crop should be placed by itself and used first, being quite useless for keeping. When housed the best shaped bulbs if wanted for seed should be strung on ropes in the old-fashioned way and suspended from the roof of some cool, dry shed or outhouse, a little frost benefiting rather than injuring them. Occasionally on wet days the stock should be examined in order that any decaying bulbs may be removed.

THINNING SPINACH.—The plants resulting from the early August sowing of winter Spinach are now forward enough for thinning. Caution must, however, be exercised in the matter, as wireworm will sometimes attack the roots between now and the final thinning stage. A distance of a foot at least ought to be left between each plant, especially if occupying warm borders where growth is likely to be soft and rapid. When sown on more exposed quarters, and not too thickly, less thinning is necessary, as the foliage is not so tender and easily affected by frost and wet. Although lime and soot were dug in when the ground was being prepared, I would strongly recommend a good surface sprinkling of the latter immediately thinning is completed, mixing with it a little fish manure or other approved fertiliser; this, with a thorough stirring with the Dutch hoe, will give the crop a good start, and certainly a much better chance of resisting grub and canker attacks. Secondary sowings should be watched, and cleaned if necessary, as soon as the growth peeps through the ground, this crop repaying any labour bestowed on it, its value in winter being so very great. I have this autumn again sown a bed of the summer Spinach, as I last year found it to be as hardy as the prickly, and certainly more crisp and juicy. Slugs are often very troublesome on heavy land in showery weather, and will soon ruin a large breadth if unnoticed. A sprinkling of lime and soot occasionally as a preventive rather than as a cure is best. Where this vegetable is much esteemed and any more vacant plots occur, seed may yet be sown with every prospect of a free growth, the produce coming in most useful at the new year. For these extra late sowings, however, a sunny border is to be preferred; sow in very shallow drills in order to secure a quick germination.

CAULIFLOWERS.—The autumn section of these will now demand attention. On hot dry soils this season Autumn Giant has a very blue appearance, owing to insufficiency of water at the roots. This condition not only induces attacks of caterpillars and other insects, but small, badly coloured and shaped heads, the same being ready for cutting long before they are wanted. To prevent this give the roots at once a good watering with liquid manure, repeating it in a couple or three days' time. It is astonishing how quickly this will alter the appearance of the plants. If growing on borders easily reached, a good drenching overhead with the garden engine will assist in cleansing all filth from the leaves and centres, largely benefiting the roots also. The next matter needing attention is retarding the swelling of the heads and preserving the colour, this being best done by tieing up the leaves over them; and if it is feared that the supply will not last out till the required date, lift the plants with as much soil as possible and lay in on a cool, moist north border, allowing a little room between each for a free circulation of air. Walcheren growing between rows of Celery may, if the soil is wanted for earthing up, be lifted in the same way and laid in also. Self-protecting Autumn is invaluable for following close on the heels of Autumn Giant, and, besides being well shielded by the interior folding leaves, comes in more piecemeal than Autumn Giant and will keep for a good time in a cool place if lifted. With care, heads of this useful Broccoli may be had up to the time Backhouse's Winter White is ready for cutting, this now being preferred by me to Snow's, as it is hardier and more easily obtained true.

EARLY CELERY.—In most places, even where extra early Celery is not desired, slight earthing up will now be necessary. Fortunately, the Celery maggot is less troublesome this season than usual and the ground is strong and clean. Where, however, this pest is present, even in small numbers, hand-picking must be practised previous to earthing up, as sometimes even after this date it will spread alarmingly. If Celery is expected in the dining-room in October, the earliest rows of Sandringham White or Early Rose should now receive the final banking up, and if rain has very lately fallen, the sooner this is done the better, as then the moisture will be shut in and benefit the roots. When the soil is being brought up to the stems it is always best for one man to grasp the stick firmly with both hands to prevent dirt getting in amongst them, but when through scarcity of labour ties have to be used, they should either consist of soft matting, which will yield to the pressure of the advancing swelling, or if of twine the ties should be afterwards cut. By this time later rows of Celery will need a little attention, suckers having in some cases grown out from the base. These must all be removed as well as weeds and a good drenching of farmyard manure administered. By no means earth up Celery in a very dry condition, or tough stringy growth and much running to seed will follow. Where any spare plants were put out on flat ground to be grown for flavouring, a channel should be formed by drawing up a good portion of soil on either side, this acting as a reservoir when water is applied.

CELERIAC.—This is a critical time for this little-grown, but most useful vegetable, as if at all dry at the roots a check is given to growth, and toughness and inferior quality result. In order to avoid this, adopt the same plan as recommended for the late Celery, namely, that of forming a channel for the reception of water. Of course where planted in shallow trenches, as it really ought always to be, the roots have a much better chance.

CARDOONS.—The earliest rows of these will now be ready for partial earthing up. Tie clean hay bands closely round the stems, afterwards banking the soil against them somewhat thickly. Cardoons are particularly thirsty subjects, and therefore need an almost unlimited supply of stimulating liquid at this particular date.

MUSTARD AND CRESS.—As the nights become colder and the days shorter these may be sown in boxes and placed in a perfectly cool house, sowing weekly.

J. CRAWFORD.

FERNS.

SOWING SPORES.

EARLY in the spring is undoubtedly the best time for sowing spores of the choicer and more delicate Ferns, yet good results may often be obtained by sowing at any other season. It is only when a very limited supply of spores is to be had that I should confine the sowing to the spring months. In the first place there is often so much other work to attend to at that season that they are apt to get neglected, while late in the autumn there is a good opportunity of giving every attention to collecting and sowing spores. The collecting of the spores is by no means an unimportant matter. In the first place, the plants from which the spores are to be collected should be kept by themselves as much as possible. Any of the choicer sorts should never be allowed to come into contact with those which germinate freely and which often prove troublesome weeds. I may mention Nephrodium molle, Pteris cretica, and some of the Gymnogrammas, especially Martensi, as being among the most troublesome.

Pteris tremula, though when sown by itself is sometimes difficult to get to maturity, will often spring up and choke the choicer sorts. The best time to take the fronds for spores is as soon as the spore cases show the first sign of bursting. In some instances the spores drop out and are lost almost before they appear to be matured. Osmunda palustris is an example of this, and Pteris argyrea must be closely watched, or all the best spores will be lost. There is a great difference in the colour of perfect spores. In the Osmunda referred to above they are quite green, and in Pteris argyrea they are black. Most of the Davallias have yellow spores, and in the Platyceriums they are brown.

The best spores are undoubtedly those collected from plants which have been grown in a light and rather dry position. Summer and autumn are the best seasons for collecting them. It is not always from those which appear the most prolific that the greatest number of seedlings is obtained. As an example of this I may mention the Onychiums. In O. auratum what appear to be good spores are produced in immense quantities, but it is very rarely we get a good batch of seedlings; while in japonicum seedlings spring up freely where the spores are hardly visible. I could give other instances of similar character.

One of the most difficult problems in Fern culture is to account for the appearance of something quite different from that which has been sown. I have known instances of certain Ferns making their appearance which have hitherto been unknown. A few years ago, when some of the choicer sorts of Adiantums were sown, I had quite a large batch of Microlepia platyphylla spring up among them, though previously I had not grown it. I have several times known Pteris tremula to come up thickly when Lomaria gibba has been sown, though the spores sown were saved from plants isolated from the tremula. I can quite understand the difficulty in getting any variety true when the spores are saved from a mixed collection, but seeing the number of Ferns we raise which do come true (I have known many instances where there has been hardly a stray weed among a good batch), it is difficult to account for the appearance of the quantities of strangers in other instances where the spores have been saved with equal care and sown under exactly the same conditions. I may mention with reference to this that on one occasion spores of some varieties saved in the nursery were sown, and as they were abortive, nothing whatever germinated in the pots, while at the same time spores which were collected by a gentleman in New Zealand, Ceylon and Java were sown, and though nothing new was obtained, we had a big crop of crested Pterises, P. tremula, Gymnogrammas and others, including various crested forms. Although it is often contended that Fern spores will retain their vitality for a number of years, and instances of this have been proved, yet newly-collected spores are more reliable and should always be used if it is possible to get them. A. Hemsley.

Frost and insect pests.—The old idea that a sharp winter destroys a great number of insects has, I think, almost exploded. At any rate, what I have seen during the past week convinces me that there is not an atom of truth in it. In many cottage gardens in Middlesex and Herts it has been difficult to preserve anything in the shape of a plant from the ravages of slugs, snails, caterpillars, and earwigs. The foliage of Sunflowers in particular has been riddled to such an extent as to mar the appearance of the plants. In some of the market gardens also large quantities of soot had to be sown immediately the Coleworts were planted out, or the crop would have been ruined, owing to the large colonies of slugs and underground grubs. Earwigs have been a veritable plague in many private gardens this summer. Peaches, Nectarines, Apricots, and in fact all kinds of fruit have been much riddled by them. The same may be said of kitchen garden crops, Cabbages, Globe Artichokes, and Lettuces having in some instances been almost devoured. Much trouble is also being caused amongst Chrysanthemums by these pests, and those who grow Dahlias for exhibition have to be constantly on the look out. I think sharp winters come much harder on the feathered tribe than on insects, as such delicate birds as robins, hedge sparrows, and wrens have not appeared in their usual numbers this summer, many doubtless having died during January and February.—J. C.

Stove and Greenhouse.

LILIUM SPECIOSUM AND ITS VARIETIES IN POTS.

Although of late years the larger and more showy Lilium auratum and its varieties have taken the first place amongst Japanese Lilies with the majority of growers, I have never been able to give way to the prevailing taste, for I consider the much older species to be superior to it in many respects. In the first place it is more easily grown. Lilium auratum is so capricious that most persons are obliged to treat it almost as an annual. Of course, there are some highly favoured localities, such as the late Mr. McIntosh's at Duneevan and Mr. G. F. Wilson's at Oakwood, where this difficulty is not encountered, but by the generality of growers, whether in the open or in pots, the same complaint is made—"We cannot keep it." This is not the case with Lilium speciosum. It can only be through carelessness or ignorance that the bulbs of this are lost. The second point in which I think the superiority is on the side of the older Lily is in the gracefulness both of the flower and plant. Another point I think is the perfume. The very strong scent of auratum and its varieties is most objectionable to many people. It has not indeed the offensive odour which some Lilies have, though it has that peculiar heavy perfume which precludes it very much from use for indoor decoration. But there is a delicacy about the scent of lancifolium and its varieties which makes them grateful even in a room. I have often noticed at some of our exhibitions how people give a wide berth to auratum, and where there are many of them they make the whole atmosphere very heavy. It is now about fifty years since I first became acquainted with Lilium speciosum, or, as it was then known, lancifolium; it had only been lately introduced. Since then I have ever grown it and sometimes under most disadvantageous circumstances, and I have seen during that period a considerable development in the beauty of the flowers, while the increase of the number of bulbs grown all over the country has been enormous, and, like auratum, it can be now had for a mere trifle. Not only are enormous quantities imported from Japan, but those wonderful cultivators of bulbous plants—the Dutch—have been raising it from seed scales, so that the number has been greatly increased. There is, however, one result, that a large number of varieties has been put into commerce, and these, like all seedlings, vary so very much, that if you order either roseum or rubrum you may get something different from what you expected. Many of them are pale and washy and consequently of little value, while, on the other hand, varieties of most decided merit have been obtained and these have been sent out under specific names. If the amount of colour in some seedlings is so small as to make them comparatively worthless, there are others which by the brilliancy of their colouring are very attractive. Of course, all persons may not have the same ideas on this subject, but I much prefer the more highly-coloured varieties. After having grown, I believe, all of the varieties, I must give the palm to—

Lilium speciosum Melpomene. — This is stated to have been of American origin, but whether from seeds or from bulbs imported from Japan I am unable to say. The ground colour is a rich rose, profusely spotted over with bright carmine spots, the edges of the petals having a line of white. It is not at all improbable, from what I have experienced, that other varieties are often sent instead of this in execution of orders. I used formerly to consider it somewhat of a poor grower, but that is not the case now, as my plants of it are as vigorous as any that I have.

L. s. superbum is, I think, one of the most satisfactory of the highly-coloured varieties when you can get a good strain of it. I have had it from various sources; the habit of the plant is excellent, and I can only wish that I could give it more room than I am able to do in my small house. The colouring is very beautiful, approaching closely to that of Melpomene, and, altogether, the plant is a most pleasing one.

There are several white varieties, and all of these are very chaste and beautiful; the finest of all is one that I have received from Holland, under the name of

L. speciosum Vestal. The petals are larger and the colour if possible purer than in any other variety, and the habit of the plant is all that can be desired. I have not as yet seen this tribe in the open ground, but I should think a group of it would be very beautiful. Next I think in beauty comes

L. s. Krætzeri, pure, clear alabaster-white, with broad petals without any tinge of green in them. This, too, is a good grower, with fine foliage. The older variety,

L. s. album, must, I think, give way to these newer and purer varieties.

L. s. macranthum is another of the highly-coloured varieties; the flowers (as its name implies) are large, and although they are not equal in intensity of colouring to those of Melpomene and superbum, they will, I think, rank next to them in size and brightness.

L. s. punctatum is a peculiar form; the spots are very pale, and I have always found it a difficult one to keep, but I should imagine, from the low price at which it is quoted, that this is not the general experience of growers.

There are a number of other varieties, such as purpuratum, atro-purpureum, Schrymakersi, corymbiflorum and corymbiflorum monstrosum, but many of these differ more in their style of growth, and I think that those that I have mentioned are the best worth growing.

Lilium Henryi.—I now come to a somewhat difficult question, on which I must touch with great diffidence. There has of late years been introduced a most beautiful Lily from Northern China, and when it has been wished to describe it people say that it is an orange-yellow speciosum. Is this literally true, or is it only a fanciful description? I am no botanist, and, therefore, possibly I am plunging into a quagmire, but it does strike me that this very beautiful Lily is the same as speciosum, with a variation of colour, caused, it may be, by climatic influence. At any rate it is a most beautiful Lily, and it is just possible that when hybridisers get to work we may have some beautiful crosses between this and speciosum, although it will not be well to indulge in too sanguine hopes upon this point,

for no really successful hybridisation has taken place with auratum since its introduction. I think we must regard the American Lilium Parkmanni as a failure, inasmuch as it has never been put into commerce, nor from what I hear is it ever likely to be. Lovers of Lilies will, however, cheerfully welcome this new addition as a most distinct and beautiful one.

I have said nothing about the culture of this beautiful class of Lilies, but in truth it is of the simplest character. I pot mine in the late autumn in a compost of leaf-mould, loam, some well-rotted manure, and sand. I occasionally use some peat, but as the leaf-mould which I use is very old it partakes very nearly of the character of peat. When potted I place the pots in cocoa-nut fibre or ashes under a glass covering, but exposed fully to the air. If the weather be severe I cover up the pots with ashes. In the spring I bring them out and put them under a still more open glass roof, and as they come into bloom I bring them into the greenhouse, where at this time of the year they are very attractive. I am careful neither to cut off the stems prematurely after they have done flowering nor to allow the pots to be soaked by the heavy autumn rains.

DELTA.

CANNAS.

GROWN in former years for the sake of their foliage, Cannas have gradually come to the front as flowering plants. Twenty years ago the blooms were insignificant and the plants ran up high, so that they were but little grown in pots. During the last few years so much progress has been made, that Cannas are now among the best things that can be grown for conservatory decoration during the summer and early autumn months. The size of the flowers has been much increased; they exhibit considerable diversity of colour, and this improvement in the blooms is accompanied by a much dwarfer growth, so that well-flowered plants can be had in 7-inch pots. Probably these dwarf Cannas would be much more cultivated by owners of small glass houses if their merits were more widely known. In large establishments they are now much in favour both for indoor and open air decoration. A great point in their favour is the remarkable ease with which they may be cultivated. As regards the amount of labour and expense involved in their culture, they are among the most economical of plants that are grown under glass. In this respect they resemble tuberous Begonias, for from November till March they can be stored away under stages of cool houses or in a cellar, needing scarcely any attention. Compare this simple way of keeping through the winter with the constant care involved in preserving the ordinary run of flowering plants at that time of year, and the true value of Cannas will easily be recognised. Plants that have been grown in pots can remain in them through the winter in any frost-proof place, giving no water from the time the foliage dies off. Just as growth commences they should be shaken out and divided, repotting in good loam, with a rather liberal addition of well-rotted manure or some concentrated stimulant. If required to bloom early in the summer they must be looked to in February, in which case it is safer to wait till signs of growth are being made before disturbing them. In a temperature of from 55° to 60° they will soon move, and can then be divided if so desired. It is better to wait until growth has begun before dividing, especially in the case of new or choice kinds, as otherwise there is some danger of the fleshy roots decaying. If a quantity of plants is required, propagation may be effected in the same way as is pursued with Dahlias, the roots being placed in warmth early in February, if possible on bottom heat, and the young shoots taken off with a bit of heel when about 2 inches long. They strike with great freedom in a temperature of 65°, and very quickly if the cutting pots are plunged in fermenting material and get bottom heat in some way. Where plants in 6-inch and 7-inch pots are required, it is necessary to then propagate annually, and of the dwarf growing forms one may have nice well-flowered specimens about 2 feet or even less in height, which are of much use for table or room decoration through the summer months. Cannas are gross feeders, and from the time the roots touch the sides of the pots liquid manure should be given twice a week, otherwise the flowers are liable to be under-sized and not so numerous as they should be. When plants with several flower-stems suitable for grouping at exhibitions are required, it is better to strike the cuttings in small pots so as to avoid root-disturbance when repotting. If the cuttings are inserted as soon as they can be had, they will eventually come into 8-inch pots, forming handsome bushy specimens that are telling when grouped with Palms, Ferns, and other things. Few things are more effective when planted out for the summer months than Cannas, and if the plants are strong when set out and the season is fairly fine, the grower may enjoy the beauty of the flowers as well as that of the foliage. When requiring a large quantity of them for this purpose I used to store the roots in a cellar, putting them in closely on a hotbed early in February, inserting the cuttings singly in small pots and plunging them in fermenting material. They quickly formed roots and were then removed to a moderately heated house and shifted into 4½-inch pots, using a rich compost. Later on they underwent the usual hardening process and were set out early in June in rich soil. In this way they went off into free growth. In those days the varieties ran up tall, making strong leaf growth, but the flowers were too small and few in number to create any appreciable effect. The only aim of raisers at that time was to obtain highly-coloured foliage and reduce the height. Fine as many of the newer kinds are, they are probably nothing to what is to come. Raisers are only beginning to realise what can be made of the Canna from a flowering point of view. Some of the newer varieties, such as Aurora, Duchess of York and Diavolo, are, however, so fine, that one might think that the maximum of size of bloom has at least been reached. Improvement will, however, undoubtedly continue, and we shall probably in time to come see Cannas with flowers rivalling in size, and perhaps brilliancy, those of the Gladiolus. Among those having dark-coloured foliage, Geoffery St. Hilaire, M. André, President Faure and President Carnot are very good, and of the green-leaved kinds, Madame Crozy, very dwarf and brilliant in colour; Jules Chrétien, Baron Sandroms, Chevalier Besson and Madame Just are good and distinct. These are, however, only a few of a great number of fine kinds all worthy of good culture. J. C.

Byfleet.



Rheum Emodi. (*See page* 199.)

TREE CARNATIONS.

SEVERAL times I have been asked to define the difference between Tree and border Carnations. As there are some varieties which are intermediate between the two types, it is a little difficult to draw the line. The term "Tree" has been applied to all those which keep up a succession of bloom, though some are quite dwarf in habit. Most of the older varieties were tall growers, and branched out freely all up the stems. I may give White Swan, Laura, Sir Charles Wilson, and Andalusia as good types, while the Old Crimson Clove, Gloire de Nancy, Mary Morris, Alice Ayres, and Mrs. Reynolds-Hole are types of border varieties. In these, even when grown in pots, the lateral branches are confined to the base of the plants, and it is rarely that these side shoots flower the same season as the main shoot, while in those belonging to the Tree section, even those of dwarf growth, the lateral shoots follow on, and in some instances keep up a succession of bloom when planted out. Winter Cheer is a good example of this. I noticed this particularly at Messrs. Veitch's Chelsea nursery about two years ago. It was planted out, and began to bloom at about the same time as the border varieties, and continued long after all the others—in fact late in November it was flowering and had plenty of buds to follow. Though few are so free as the above, I have known others to throw up successive flower-stems four and five times in a year. The seedling plant of Henry Gibbons flowered five times within a year. Miss Joliffe is another example of this type.

Pride of Penshurst is sometimes included with Tree Carnations, but it certainly belongs more to the border kinds. Though it is more inclined to flower from the laterals the first year than many varieties, it will also succeed better in warmth, and by propagating from cuttings early in the spring the same plants will flower the following autumn. By growing on separate batches of plants it is not impossible to have flowers of this throughout the winter. Germania is much less inclined to flower from the laterals the same year, though it will bloom well in the autumn if strong plants are potted on in the spring and the first flowering stems taken out as soon as they begin to run up.

I have tried a good many border varieties for winter flowering, or rather early spring flowering in pots, but have always found the flower-stems run up long and weakly compared with those of the Tree type. None of the Carnations will stand much forcing, and I believe failure often occurs through giving too much heat and not enough air during the winter. Plenty of light, air and sufficient heat to keep out frost are the chief essentials, and though over-watering must always be avoided, it is very damaging to go to the other excess, for if Carnations once get very dry in the pots when in bud the flowers will not open perfectly; it is necessary to be careful.

Winter-flowering Carnations may be grown in the open during the summer, but should be protected from heavy rains and taken indoors early in the autumn. It is important that the plants should be kept free from insects. Although there may be no appearance of any when the plants are taken indoors I should recommend the use of the fumigator, as this will check the small thrips which are almost invisible to the naked eye, though terribly destructive to the blooms. The white specks on the blooms, which some are puzzled to account for, are a sure indication of these destructive little insects. The little maggot, which of late years has been a great source of trouble to Carnation growers, must also be looked after. Frequent use of soot water will go a great way towards keeping off the fly which breeds this maggot, but when it once gets into the plants it is only by catching it before it gets buried too deeply in the stems that the plants can be saved.

A. Hemsley.

Fruit and Vegetable Crops.

NORTHERN.

Hurworth Grange, Darlington.—Strawberries this season have been especially good. All kinds of Currants are good, but red are hanging badly, owing to the constant wet weather we have had during the two last weeks in July and first two weeks in August. Raspberries were also poor from the same cause. Apples are a heavy crop. While Pears are thin, Peaches in case an excellent crop and of good size, but require sun. Apricots are a complete failure. The trees were well set with bloom, but the frosts we had during February killed every bud. Plums are very irregular. While some trees are already breaking down with the weight, a great many trees are not carrying a single fruit. This appears to bear out the remarks made in my report last autumn, that so many trees suffered from the May frosts in 1894 and had to break again, consequently had not time to ripen and bring the buds to maturity, as the trees that were sheltered and escaped the damage are the trees that are carrying the crops. We have had abundance of rain (nearly 6 inches in July) and fruit has swelled pretty well. As a rule fruit is late, and the late varieties will require a fine autumn, or they will not ripen.

Early Potatoes were good, but in the second earlies I am finding a few touched with disease. Peas have been and are still good; in fact all vegetables are pretty satisfactory.—Joseph Simpson.

Calderstone, Allerton.—The hard frost of the past winter did little harm here. The only things that suffered were Raspberries and two varieties of Strawberries, namely Laxton's Latest of All and Aberdeen Favourite. The latter I have looked upon as one of the hardiest, but I am discarding it this season. The Strawberry crop here has been an excellent one. John Ruskin has done well and is a handsome fruit. Scarlet Queen is still better and has cropped abundantly. Those who have not grown it would do well to give it a trial. It promises to be a strong rival to our old friend Vicomtesse H. de Thury. Last year I thought Laxton's Latest of All the best late variety. This year Waterloo has been much better and lasted longer. Dr. Hogg if planted in a slightly shady position is nearly as late as any and much better flavoured, if not of the brightest colour. Other fruit crops have been good, Apricots excepted. Apples are a good crop and some time has been spent in thinning, which I think is labour well spent. Pears are a fair crop. Cherries of all kinds are most abundant. Peaches and Nectarines, Red, White, and Black Currants, also Gooseberries have been abundant.

Vegetables look well and seemed to do well with the dry weather. Those who have not grown Veitch's Climbing French Bean should do so. I think it will be found that the Scarlet Runner will not be so much grown, as the former is of better flavour and does not require such tall stakes. Sorry to find the Potato disease has made its appearance in the late Potato crop.—W. Tunnington.

Grimston Park, Yorkshire.—Apples are not a full crop this year; Lord Suffield, Keswick Codlin, Cockpit, Warner's King, Lewis' Incomparable, Yorkshire Greening and Copmanthorpe Crab have good crops. The fruit promises to be fine in size, but not in colour. If I were planting either Apple, Pear or Plum trees for commercial purposes I should without hesitation plant those on low worked stocks, allowing each kind of Apple to form its naturally shaped head, in no case permitting them to exceed from 10 feet to 12 feet in height. Trees of the former are much more under control than standard trees are, and, other things being equal, will give much better returns. Apricots are a good half crop, fruit fine, but not well coloured, owing to the dull wet weather of the past month. Kaisha and Hemskirk are the most free cropping Apricots, but the fruit is small and not good in flavour. Moorpark and St. Ambrose are the best of the early fruiting kinds. Cherries are a fine crop, especially Morellos, which is the main kind I grow. Sweet Cherries, excepting May Duke, never fruit well here. As mentioned in previous notes I find pyramidal-shaped bushes of Morello Cherries give quite as good crops as the same kind when grown on north walls. Peaches are a very nice crop, the trees clean and healthy. I picked the first dish of ripe fruit on August 10; the kind was Hale's Early, which with me is a good cropper on walls. It is fully a week earlier than another useful wall Peach, viz., Condor. Nectarines do not succeed so well with me as Peaches; the fruit almost invariably cracks just before ripening. I find it an advantage to lift the roots of outdoor Peach trees every two years. Pears are not quite an average crop, Marie Louise and Jargonelle being the only two sorts which have good crops amongst some twenty kinds, excepting the very early kinds, such as Doyenné d'Ete and Citron des Carmes, which always give good crops. Plums are not a full crop, excepting Victoria; on walls they are very thin as a whole. Jefferson, Kirke's, Orleans and Green Gage are the best kinds of the choicer Plums hereabouts, and they must be grown on walls to succeed. We have a thin crop of Damsons in an orchard grown as standards. It may be of interest to mention these trees are growing in an alluvial soil which is only just above the water line during the winter, when the adjacent land is often flooded by the overflowing water from the river Wharfe. For several years the trees were healthy, but never fruited. About eight years ago, after a heavy flood, it was decided to give the whole orchard a good dressing of land lime The season but one afterwards I had a splendid crop of fine Damsons. Needless to say I have since given two other dressings of lime, though not quite so heavy. Some five miles from here there are large orchards of Winesour Plum trees; it is at Sherburn-in-Elmet. The soil is a loamy one overlying the carboniferous limestone. The fruit from these orchards is much noted for its fine flavour when preserved, and generally fetches a good price. The trees are mostly on standards, and one of the largest growers tells me he always propagates his stock from suckers of old fruiting trees, never from seed. The main points as to culture are an occasional thinning out of branches in the winter, being careful not to overdo this, or the trees are a year or two before they fruit well again. The soil underneath the trees is laid down in Grass, a dressing of manure being given occasionally when the trees are established and bearing well. Small fruits have been abundant and fine. Strawberries were a splendid crop. La Grosse Sucrée, Noble, Héricart de Thury, Keens' Seedling, Auguste Nicaise, President and Newton Seedling are the kinds I have. Raspberries were very good, especially Superlative. Walnuts are very plentiful; Hazel Nuts fairly so. Mulberries not so well cropped as last year.—Henry J. Clayton.

Chillingham Gardens, Belford, Northumberland.—The fruit crops in this neighbourhood on the whole are very good this season. We have had splendid crops of Strawberries, Gooseberries, Red, White and Black Currants. Raspberries are a heavy crop and very large, also dessert Cherries and Morellos. Apples are a very heavy crop. Pears are not so good. Peaches light and Apricots few, as most of the spurs and a good many branches were killed by the severe winter. This is not a great Plum locality; still Victoria, Early Prolific, Prince of Wales, Cox's Emperor and Prince Englebert have good crops.

The soil is a good strong loam, but we suffer much from early and late frosts. We had 5° in June, and a cold wind which cut down Potatoes, Scarlet Runners and French Beans to the ground. —R. Henderson.

Thorpe Perrow, Bedale, Yorks.—The Apple crop is fairly good, some kinds being heavily laden. Pears are much the same, early sorts carrying the best crops. Plums with us are not good, our heavy clay soil does not suit them. On some parts of this estate Plums do well on a limestone bottom and bear enormous crops. Bush fruits were plentiful, especially Red and White Currants. Black Currants suffered from the very severe frost in the winter, so did some of the tender sorts of Gooseberries; many of the latter were quite killed. Strawberries were abundant everywhere in this northern part of Yorkshire. Apricots are very scarce. The spurs were much injured by the frost; in some exposed places they were quite killed.—William Culverwell.

Naworth Castle, Carlisle.—Apples are above the average. Apricots and Pears good. Cherries, both sweet and Morello, a fair crop. Strawberries a very heavy crop, but the fruit small. Gooseberries and Red and White Currants are above the average, while Black Currants are very poor. Raspberries are a poor crop, half the canes having been killed by the severe frost last winter. Plums are a light crop, Green Gage and Victoria being the best.

Early Potatoes have been small, but late varieties look better than I have seen them for the past two seasons. All the Brassica tribe is very backward in this district. Onions and Carrots are good and free from maggot. French Beans and Scarlet Runners are good, but they received a severe check on June 13 and 15, when we had 3° and 5° of frost respectively.—A. E. Sutton.

Eshwood Hall, Durham.—The Strawberry crop has been an excellent one, both with regard to quantity and flavour of the fruit. The varieties I have found the most suitable here are Vicomtesse Héricart de Thury (which stands foremost as a sure cropper), President, and Laxton's Noble. Raspberries, Currants, and Gooseberries have never been more plentiful than they are this year with me, which, I think, is pretty general in this district. Apples are a fair average crop; they would have been an excellent crop but for the long-continued drought. Growers who took the precaution to mulch their trees well in

the early part of the season will have seen the advantage of it now. Pears are a moderate crop, but on the whole as good as we can expect in this northern climate. The same remark applies to Plums. Cherries are a good crop, but this season they have excelled themselves, as I have never in the north seen finer crops.—A. BENTLEY.

Chetwynd Park, Newport, Salop.—The fruit crops here taken altogether and in the district generally are very good. The only failure is Apricots, but I believe they bore a very heavy crop last year and there were no flower-buds formed. Apples are very abundant, and are looking clean and healthy. Pears a fair crop, but nothing like last year, the better varieties being thin. Plums a good crop, and Damsons are heavily laden. Bush fruits have all been abundant, and Strawberries an enormous crop. Cherries are thin, with the exception of Morellos, which are a heavy crop. Here we have a light and sandy soil on gravel. Stone fruits are consequently more uncertain, especially in dry seasons. The best flavoured Plums are Reine Claude du Bavay, Green Gage, Kirke's and Jefferson.

The vegetables suffered much in the early part of the summer. Cauliflowers were only half a crop, many being lost. Onions are not so good this year, being much troubled with the maggot. Potatoes have been, and are, very good, and late ones, with the acceptable rain we have had, are looking very promising.—N. SHERWOOD.

Worsley Gardens.—The few Plum and Damson trees we have are carrying the best crop I have seen here. All varieties of early Apples are a full crop of good quality; later varieties are good in quality, but a thin crop. All trees are healthy and good, having quite recovered from the disastrous effects of last year. Pears are a good crop all round. All small fruits, Strawberries, Raspberries, Currants, and Gooseberries have been plentiful and of capital quality. In consequence of the dry hot weather we had little succession of Strawberries; all came in together.

During the dry weather it was difficult to keep vegetable crops alive, but we have now an abundant growth. Potatoes up to the present are coming out clean and good, but I notice an attack of disease in the foliage, which must be favoured by this damp close weather. The past winter, severe as it was, has done very little damage beyond completely checking every bit of vegetable. The winds that prevailed during the past dealt roughly with many evergreens, but they made a speedy and complete recovery.—W. B. UPJOHN.

Castle Howard.—With the exception of the excessive cold at the beginning of the year, the weather has been most favourable to the fruit crops. Towards the end of May rain was needed, and it came on June 1 in sufficient quantity to get to the roots of most things; therefore the yield of fruit has been, and is, abnormally large. Apricots, however, are scarce, but the enormous crops of last year may have as much to do with the comparative failure as the long-continued and severe frost of the early part of this. Apples are plentiful, and the individual fruits promise to be large and reach maturity early. Pears are under the average, but of good size. Plums are the heaviest crop I have seen in this neighbourhood, especially Rivers' Early, Victoria, Gages, and Damsons. Cherries have been a fine crop of well-developed fruit. Peaches and Nectarines an average yield, Hale's Early Peach being exceptionally fine. Apricots almost a failure, in some places quite so. Gooseberries have been an enormous crop, and dessert varieties of excellent quality. The same remarks apply to Raspberries. Red Currants a good average yield, but Black rather thin on the bushes. Nuts an average crop. Strawberries have been an abnormally heavy crop, the fruit large and of excellent flavour.—J. RIDDELL.

Elmet Hall, Leeds.—Apples average crop, fruit fine, especially Lord Suffield. Pears in some cases heavy crops, Jargonelle and Winter Nelis with us are the best. I have seen trees of Jargonelle in the district covered with fruit and of fine quality. Cherries have dropped their fruit very much in the dry weather, although some Morellos have a fair average crop. Plums, of which Victoria is the most popular, are very irregular, some trees having more fruit than the branches are able to support, while others adjoining have none. There are not many grown about here, as they appear very uncertain owing to late spring frosts. Kirke's and Jefferson we esteem the best for flavour. Black Currants below the average, but Red and White very heavy crops of fine clean fruit. Gooseberries have probably never been better, both as regards quantity and quality,



Rheum officinale in flower. (*See p.* 199.)

Whinham's Industry especially so. Strawberries and Raspberries have been abundant and large; of the former I find Vicomtesse H. de Thury and President most prolific. The soil here is a strong clay, and by deep cultivation and early mulching we do not suffer so much from drought. The late thunderstorms have damaged the fruit very much, causing many to rot, while Gooseberries are bursting from the excessive rains and continued damp, rain having fallen on twenty-one days, with a total of 5·82 inches for July.

Vegetable crops are very good, Peas especially, of which we always depend on Ne Plus Ultra for general and late crops; nothing better for flavour, and can be had in succession by timely sowings until frost comes. Potatoes are sound and good, free from disease up to time of writing. Carrots are the only failure; every year they succumb to the grub. This year we filled the drills, after sowing, with charred refuse from the rubbish heap, and have given dressings of nitrate of soda, but with no better results, and sown on fresh trenched land, too. Probably the soil may be too cold and stiff for them.—THOS. BONSALL.

Anderley, Kirkby Lonsdale.—I consider 1895 a good average season; the fruit trees of all descriptions wintered well and the drought did not affect us. Amongst Apples, Keswick Codlin, King of the Pippins, Fearn's, Stirling Castle, Ecklinville, Lord Suffield, Hawthorden, Annie Elizabeth, and Northern Greening are noticeable for heavy crops. Pears are well represented by Marie Louise, Louise Bonne of Jersey, Doyenné du Comice, and Winter Nelis. Only Victoria Plum bears freely with us. Kirke's on walls does well, but in this cold district we do not get many sorts to fruit. Damsons bear well in the immediate neighbourhood. Bush fruits have borne magnificently—Gooseberries Whinham's Industry and Warrington bearing heavily. Strawberries have been excellent, reminding one of the crops and flavour of more southern climes. Dr. Hogg is a fine cropper; John Ruskin does well. Our soil is a light one and gravelly, so we get our finest fruit off the forced plants that were planted the previous season.

Vegetables are looking well. Peas want sunshine. Ne Plus Ultra is 5 feet high and not in flower. Webb's Senator is a fine second early. Early Potatoes were cut down on June 15, so rather a lighter crop than usual, but grand in flavour, particularly Sharpe's Victor. Late Potatoes are promising and no appearance of disease yet. The Bruce and Windsor Castle are favourite field kinds.—W. A. MILLER.

Hummersknott, Darlington.—The following may be taken as indicative of the fruit crop in our immediate locality: Apricots a failure. Apples and Pears average. Plums above average on standards. Strawberries, Raspberries, Gooseberries, and Currants other than Black are an abundant crop. Black Currants under average.—J. SHORT.

Windlestone Hall, Ferry Hill.—The fruit crop in this neighbourhood is very good. Apples a grand crop. Pears on walls good, in the open a medium crop, the bloom having been damaged by cold, biting winds. Apricots an average crop; Hemskirk by far the best. Plums on walls carrying heavy crops; in the open many dropped owing to the long drought. Those most in favour here are Jefferson, Bryanston Green Gage, Transparent Gage, and Kirke's. Strawberries were an immense crop, but owing to the dry season rather small. On the light soil here Black Prince does well and is earlier than Noble. Currants, both Black and Red, are plentiful, and Gooseberries are a very heavy crop. Raspberries also good, but are being spoiled by repeated heavy rains. The heavy rains will be of immense benefit to orchard trees and those under walls, which, in spite of repeated waterings, were very dry.—C. G. BAILEY.

Birdsall, York.—In this district, with a few exceptions, the fruit crops are good. Apples average crop. Apricots none on wall, abundance in Apricot shed without front lights. In this structure the fruit and wood get ripened early, a great advantage in every way. Peaches on walls a nice crop; the unripe wood of the trees was killed by the severe frost of the past winter. They are now looking healthy and well. Plums average crop. Pears under average, some varieties on wall good. Cherries (dessert and Morello) abundant. Strawberries over average and excellent in

quality. Raspberries, Gooseberries, Red and Black Currants abundant and good. Very little damage done to fruit trees by the late frosts, and we were favoured with heavy showers of rain in this locality during the time the Strawberries were in bloom.—B. Wadds.

Societies and Exhibitions.

ROYAL HORTICULTURAL SOCIETY.

September 10 and 11.

The chief features at this gathering were the displays of vegetables both in the conservatory and the large marquee. In the former were arranged the non-competitive exhibits by the trade and private growers, prominent amongst which was the magnificent display made by Messrs. Sutton and Sons, Reading, notably the Tomatoes in great variety—these were grand examples of culture—the huge Onions, and those two standard Potatoes, Satisfaction and Windsor Castle. Opposite these were choice assortments of various vegetables of the best strains from Messrs. J. Veitch and Sons, whilst lower down were other admirable collections from Syon Gardens, Mr. Wythes, as usual preferring the best table qualities to mere size, and from Messrs. R. Veitch and Son, of Exeter. Another most noteworthy display was that made by Sir Trevor Lawrence, Mr. Bain thus making a new departure. The special features here were the dishes of vegetables of sorts not frequently seen, as well as the standard of quality as opposed to that of mere size. From the Royal Gardens, Frogmore, Mr. O. Thomas sent a most admirable display, arranged with excellent taste as a trophy; here again it was quality that predominated in preference to size. In the competitive part of the exhibition there was a tendency on the whole to stage overgrown examples rather than those of the very best quality. This applied to Beetroot, to Cauliflowers, and other every-day kinds of vegetable. The collections of vegetables were arranged with good effect, so also was the premier collection of salading in twenty-four varieties from Syon Gardens—a most tasteful display in a round basket.

Of flowers the Dahlia held undoubted sway, notably in the Cactus and the single sections, a few decided novelties being found amongst the former. In this flower a new departure was made by an arrangement of Dahlias to show their suitability to purposes of indoor decoration in the home. Miss Hudson, of Gunnersbury House, is credited with this exhibit. Reference should also be made to the most instructive collection of Roses staged in bunches from Waltham Cross, whence Messrs. W. Paul and Son had sent a selection of the best autumnal bloomers, chiefly Teas and Chinas.

Orchids were in point of numbers quite a minor portion of the show, the entire exhibit of plants being easily counted upon the fingers. In spite of this, however, a few charming hybrids were exhibited from Messrs. Veitch's collection.

Orchid Committee.

On this occasion only one first-class certificate was awarded, but no plant could hardly be more worthy of it than

Lælio-Cattleya Clonia superba (Lælia elegans Turneri × Cattleya Warscewiczi), which is quite a gem amongst hybrids. The contour of the flowers is that of C. Warscewiczi, but with the upper sepal shortened, the petals being broad in comparison to the sepals; the colouring partakes greatly after that found in Lælia elegans Turneri (itself the best of its type), a deep rosy pink with darker veins, the substance partaking greatly of the same parent, whilst the lip in its expanded form pointed most decidedly to Cattleya Warscewiczi; this was of full size and lightly fringed with a wavy outline, the colour being a bright purplish crimson, altogether a most notable hybrid and one of evidently free growth. From Messrs. J. Veitch and Sons.

Awards of merit were made to—

Lælio-Cattleya Eunomia (C. Gaskelliana × L. pumila Dayana), in which the growth was quite intermediate, the outline of the flowers, however, inclining towards the last-named parent, but much larger; the sepals and petals were of a darker tint than in C. Gaskelliana, with the lip also darker, but not so much so as in L. pumila Dayana. In point of size it was intermediate, the throat having a prominent blotch of old gold. From Messrs. J. Veitch and Sons.

Lælio-Cattleya Parysatis (L. pumila × C. Bowringiana).—This is a much dwarfer hybrid than the preceding, having evidently in this respect been more influenced by Lælia pumila. The flowers are about the size of those of C. Bowringiana, but the colour is a bright rosy pink in the sepals and petals, whilst the throat is quite light, thus contrasting all the more with the purplish rose of the lip. From Messrs. J. Veitch and Sons.

Cypripedium Carnusianum (Veitch's var.) (C. Haynaldianum × C. Spicerianum).—The latter parent is to be seen in the form of the dorsal sepal, which in point of colour is, however, much deeper, being of a deep purplish flush with the base spotted, this latter characteristic being also clearly defined in the petals, which are spotted with purplish bronze on a light ground, the extremities being nearly all purple. The lip is of a bronzy tint. The plant bore two flowers on the one spike, the fully developed one having the lower sepal divided, forming, as it were, two wings. From Messrs. J. Veitch and Sons.

From the same source came also a lovely example of Lælio-Cattleya Nysa purpurea (C. Warscewiczi × L. crispa), in which the very conspicuous lip had assumed more of the purple as seen in L. crispa, whilst the sepals and petals partook of its other parent. Cypripedium Metis (C. philippense × C. Boxalli) was also included. This has the growth and dorsal sepal of the latter, with more of the form of the petals imparted by the former parent and its smaller lip. C. Boxalli atratum Lawrenceanum, another form, was also included.

A botanical certificate was awarded to Maxillaria striata, a distinct species with the sepals and petals of old gold with crimson lines, the lip being white with purplish lines. From the Botanic Gardens, Glasnevin. Mr. Cummings brought from Mr. Smee's collection at The Grange, Carshalton, a fine form of Cattleya Hardyana, the lip very conspicuous, well defined and of deep colour, the spike bearing three flowers.

Floral Committee.

Awards of merit were granted to the following:—

Dahlia (pompon) Claribel.—A fancy variety with neat flowers, the florets white, tipped and flushed with purple. It was shown by Messrs. C. Turner and Sons, Slough.

Dahlia (pompon) Zoe.—The flowers of this kind are of a rich yellow shade, the florets tipped with white in a distinct and attractive way. From Messrs. C. Turner and Sons.

Dahlia (pompon) Ganymede.—This is of a novel shade of orange-buff, flushed with mauve-pink on the edges of the florets. From Messrs. C. Turner and Sons.

Dahlia (pompon) Madeleine.—Another of the fancy kinds, pale yellow edged with rose. Also shown by Messrs. C. Turner and Sons.

Dahlia Willie Batchelor.—This has flowers about the size of those of the pompon varieties, but with the long reflexed florets as seen in the larger decorative varieties, and striped with scarlet and white. It was shown by Mr. Batchelor, Harefield Park, Uxbridge.

Dahlia (single) Mrs. Gore Langton.—A distinct and fine-flowered variety of a purplish crimson shade, with a rich zone of maroon-crimson at the base of the petals. Also from Mr. Batchelor.

Dahlia (pompon) Rosebud.—This pretty kind, with flowers of a clear rosy pink shade, was shown by Messrs. J. Cheal and Sons, Crawley.

Dahlia (Cactus) Mrs. Wilson Noble.—The flowers of this are of the best Cactus form and charming in colour, which is a clear, soft cerise or salmon-red. From Messrs. J. Cheal and Sons.

Dahlia (Cactus) Miss A. Jones.—A bright rich scarlet self of brilliant effect, and shown by Mr. J. T. West, Tower Hill, Brentwood.

Dahlia (Cactus) Miss Nightingale.—This has fine flowers of a distinct bronzy red, shading to orange-yellow at the base of the florets. Also from Mr. West.

Phlox Leonardo da Vinci.—One of the herbaceous varieties, its flowers white, with a prominent eye of carmine-red. It was shown by Messrs. Barr and Sons.

Sunflower Stoke Park Favourite.—Another form of the annual Sunflower, its flowers of medium size, having broad, rich yellow rays and a black disc. It was shown by Mr. J. Hughes, Stoke Park Gardens, Guildford.

Messrs. W. Paul and Son, of Waltham Cross, made a fine display of autumn Roses, showing a large and comprehensive lot of the very best autumn-blooming sorts, in which Teas and Monthlies were a prominent feature. Among Teas, Marie van Houtte, Mme. Hoste, G. Nabonnand, Mme. Chedane Guinoisseau, Ethel Brownlow and Sylphe (their new pink variety) were all admirably represented by large bunches of fresh flowers. In Monthlies, Duke of York was shown in great quantity; Mme. Laurette Messimy was charming, and Queen Mab, a new kind, well shown, is certainly a noteworthy addition to this class and most distinct in its rich shade of orange-buff flushed with pink. La France, Mrs. J. Laing, Marie Baumann, Lorna Doone, Captain Christy, Ulrich Brunner and Eclair were also shown in good bunches, and several Polyantha varieties. Altogether the group was a first-rate representation of the Rose beauty so easily obtainable, yet so conspicuously absent from gardens at this season. A silver Flora medal was awarded. A similar award went to Messrs. Barr for a large and varied group of the best hardy and annual flowers now blooming. Phloxes were fine, especially Bayardère, a pure white self, and Liberté, salmon-rose. Pyrethrums, Heleniums, Helianthuses, Echinops Ritro, early Michaelmas Daisies, with Sweet Peas, Verbenas, Phlox Drummondi, Balsams and Antirrhinums were all features in the group. Dahlias in show, fancy, and Cactus varieties were very well shown by Mr. S. Mortimer, of Farnham, whilst Messrs. J. Cheal and Sons made a great display, also chiefly with Cactus, pompon and single-flowered sorts. A silver Flora medal was awarded to both groups. Mr. T. S. Ware exhibited a grand bank of all the best Cactus Dahlias, with pompons in bright colours massed in the foreground. A silver-gilt Banksian medal was awarded. Messrs. C. Turner and Sons and Mr. J. T. West also showed a number of new pompon and Cactus Dahlias in addition to those to which awards of merit were made. Mr. Salmon, West Norwood, received a silver Banksian medal for a group of Zinnias, African and French Marigolds, China Asters, Salpiglossis, Dianthus, Phlox Drummondi, and other annual flowers. A similar award was given to Mr. Anthony Waterer for a group of five fine seedling plants of the blue Colorado Spruce (Abies pungens argentea), the plants charming in colour and perfect health. Miss Hudson, of Gunnersbury, made a large exhibit of cut Dahlias, in pompon, Cactus, and single varieties, arranged in large vases, epergnes, and baskets, with a few Grasses and Asparagus growths, showing well that even Dahlias can be arranged artistically and pleasing for house or room decoration. A silver Banksian medal was awarded to this instructive exhibit. From the Earl of Ducie, Tortworth Court, Gloucester, came branches of Quercus Kellogie, a distinct Oak with large leaves deeply cut into sharply pointed lobes, and Q. lobata, a variety having a small narrow leaf with the lobes regularly rounded.

Fruit Committee.

A first class certificate was given to:—

Melon The Earl's Favourite.—A green fleshed fruit of medium size, richly flavoured, and

above the average of new seedlings; this was given an award of merit last autumn, and was now given the higher award. From Mr. Ward, Longford Castle Gardens, Salisbury.

Awards of merit were given to:—

APPLE REMBOROUGH.—A very heavy, nice-looking cooking variety, much like Alfriston in shape, but very firm and of a dark bronze colour on the sunny side. It is a heavy cropper and in season early in the year. From Mr. Cummins, The Gardens, The Grange, Hackbridge, Wallington.

FRENCH BEAN NORTHUMBERLAND PROLIFIC.—A very free-cropping, early variety, with large, long broad pods almost equal in size to those of Canadian Wonder, but much earlier. It is a cross between Mohawk and Ne Plus Ultra. From Mr. G. Wythes, Syon House, Brentford.

RUNNER BEAN SUTTON'S A 1.— Sent out by Messrs. Sutton in 1891. It has been on trial at Chiswick this season. It is a very fine variety, noted for size, flavour, and cropping. From Messrs. Sutton and Sons, Reading.

The following Potatoes, having been on trial at Chiswick and received three marks, were given awards of merit:—

POTATO SYON HOUSE PROLIFIC.—A handsome variety, with rough skin and shallow eyes. It is most prolific and free of disease. It is a cross between Sutton's Seedling and an unnamed variety. From Mr. G. Wythes.

POTATO COCKERELL'S SEEDLING.—A white-fleshed round of good quality, a heavy cropper and of excellent quality.

POTATO PRIDE OF TONBRIDGE.—A flattened round, nearly fluke shaped, rough skin, white flesh, very few eyes, and heavy cropper.

POTATO TRIUMPH.—A well-known main crop variety with rough skin. It is a heavy cropper of splendid quality. From Messrs. Sutton and Sons, Reading.

POTATO BIRMINGHAM.—A white-fleshed variety of good quality.

Awards of merit were given to Cabbages Early York, Sutton's Little Gem, Leed's Market Red, Early Erfurt, Winnigstadt, St. John's Day, and Savoy Petit Trise d'Aire.

Messrs. Spooner, Hounslow, showed a fine collection of Apples, notable being Keswick Codlin, Lord Suffield, Yellow Ingestre, and Alfriston (silver Knightian medal). Messrs. Bunyard sent fine Lady Sudeley Apples, and Messrs. Rivers Marshall's Seedling and very fine Cox's Orange Apples. Mr. Horne, Rochester, showed a very nice-looking seedling Apple, and Mr. Hudson choice alpine Strawberries. From Mr. Webster, Gordon Castle, N.B., came two seedling Plums of great merit, but too ripe. Mr. Miller, Esher, and Mr. Corbett, Mulgrave Castle, Whitby, sent seedling Melons. Messrs. Cheal, Crawley, had some very pretty varieties of Crabs.

Vegetable Show.

For the best twelve dishes of vegetables, distinct kinds, there were five exhibitors, these collections forming a special feature of the show. Mr. T. Wilkins was first with a grand lot, Giant Cauliflower, Lyon Leek, Goldfinder Potato, Autocrat Pea, Perfection Tomato, and Globe Artichokes very fine. Mr. Bowerman, Hackwood Park Gardens, Basingstoke, was a close second. For nine dishes, Mr. Waite, Glenhurst, Esher, Surrey, was first with very fine Carrots, Solid White Celery, Satisfaction Potato, Snowball Turnip, Autumn Mammoth Cauliflower, &c.; second, Mr. W. T. Empson, Ampthill. For six dishes the quality fell off somewhat, and there was less competition, Mr. Kneller, Basingstoke, being first, with good Carrots, Onions, Celery, Tomatoes, and Windsor Castle Potatoes. For three Cauliflowers there were eight competitors, Mr. Empson being first. In the class for Scotch Kales, Mr. G. Wythes was first with fine heads, Mr. Pentney, Worton Hall, Isleworth, being second. Mr. Bowerman was first for Brussels Sprouts, having very solid Dwarf Gem. There was only one lot of Spinach, Mr. Empson being first with Victoria of good quality. Vegetable Marrows were well shown, Messrs. Mairs, Lye, and Wythes taking the awards. Messrs. Lye and Waite had the best Cucumbers in order named. For Scorzonera, Messrs. Pentney and Osman were the successful exhibitors. For Runner Beans, Mr. Lye was first and Mr. Bowerman second. Dwarf Beans were equally numerous and good, Canadian Wonder being chiefly shown, Messrs. Bowerman, Wythes and Ward taking the awards. Broad Beans were scarce, the season being past. Mr. Lye had fine Laxton's Alderman, Mr. Bowerman being a good second with a Windsor variety. For Peas there were eight entries, the varieties staged being Autocrat, Ne Plus Ultra and Dwarf Mammoth, Messrs. Palmer, Ward and Wythes taking the awards in order named. For Globe Artichokes, Mr. Wilkins was first and Mr. Empson second. For Cardoons only one lot was staged by Mr. Wythes, who had very fine heads. Potatoes were largely shown, but much too coarse. Mr. Pope was first in the three kidney varieties, with Magnet, Matchless and White Kidney. For rounds, Mr. Pope was again first with Satisfaction, Perfection and Nonsuch. Mr. Lye had the best single dish of kidneys. Leeks were not numerous, but good for the season. Mr. Lye was first with Prizetaker; second, Mr. Mairs. For Onions Mr. Waite first, and Mr. Mairs second. Turnips were plentiful, Messrs. North and Osman taking the prizes for the three varieties, all white roots being staged. For single dishes, Messrs. Waite and Lye had very good Snowball varieties. For Celeriac, Mr. Wythes was first, with good solid roots. The class for Carrots was very strong and all good, Messrs. North and Pope taking the awards for the three varieties, Messrs. Mairs and Wilkins for the single dish. Parsnips were equally fine, Mr. Lye being first with Student. For Beet, Mr. Webster, Beckenham, was first, and Mr. Waite second. There were some very fine heads of Celery, Messrs. Wilkins and Waite taking the awards. For the best collection of salading, Mr. Wythes was a good first, staging twenty-four varieties, Tomatoes in a growing state being trained over the basket, all the small salads and the Celery being beautifully blanched. For the best pot and sweet herbs, Mr. Salmon, West Norwood, was a good first. For any other vegetable, Mr. Waite staged Tomatoes.

In the large vinery was staged by Messrs. Veitch a very extensive collection of vegetables, all the new and really good vegetables and salads being represented (silver-gilt Knightian medal). The same remarks apply to a grand collection of vegetables shown by Messrs. Sutton and Sons. Here were probably the finest dishes of Potatoes and Onions ever staged. The collection included fifteen varieties of very fine Potatoes, Ailsa Craig Onions, Prizetaker Leek, Cabbages, &c. (silver-gilt Knightian medal). From the Royal Gardens, Frogmore, was staged a large quantity of vegetables of all kinds tastefully arranged. (silver-gilt Knightian medal). A very good collection of vegetables was sent by Mr. Wythes from Syon House, Brentford, some sixty varieties being staged, including a dozen plants of Tomatoes in pots of the leading kinds (silver-gilt Knightian medal). A collection which was much noticed was made up of small varieties, rarely exhibited, including scarce herbs, various kinds of Aubergines, Capsicums, Indian Corn, Japan and China Marrows, also various small Gourds, Haricot Beans, Seakale, Cabbage, and Tomatoes from Mr. Bain, Burford Lodge, Dorking (silver-gilt Knightian medal). A very fine collection of Onions, Leeks, Carrots, Savoys, and other vegetables was staged by the Messrs. Cannell, Swanley (silver Knightian medal). Messrs. R. Veitch and Son, Exeter, staged very fine Tomatoes Flying Dutchman, Potatoes (Red Beauty being very good), Leeks, Carrots, Beet in variety, and Cauliflowers (silver Knightian medal). Messrs. Barr and Sons staged a most meritorious collection of Kales and thirty varieties of Tomatoes, including some kinds rarely seen, but remarkable for their good quality. The fruit was of a nice size, none being too coarse (silver Banksian medal). Messrs. Fellowes and Ryder, Orpington, staged a very fine lot of Duke of York Tomato, remarkable for their clear skin, smoothness and good quality (silver Banksian medal). Messrs. Dobbie, Rothesay, had a small, but remarkably good collection, the varieties shown being Champion Leek, Parsnips, Tomatoes, Celery and Parsley (bronze Banksian medal). Mr. Ward, Richmond, was given a bronze medal for a large dish of Chemin Tomatoes grown in the open, the fruits being very fine. A nice collection of seven varieties of Peas with Lettuces sent by Mr. Hudson, received a cultural award. A similar award was given to Mr. Wilkins for fruits of the Mango from Inwood House, Dorset. Mr. Empson, Ampthill House Gardens, Bedford, had some new Carrots of very fine quality. Mr. Woodward, Isleworth, sent good market Cabbage in quantity with Brussels Sprouts and Turnips. Mr. Powell, Weybridge, sent a huge Gourd. Mr. Wythes had very good Veitch's Autumn Protecting Broccoli, and Mr. Jones, Hanger Hill, Ealing, had a large stand of Mushroom spawn.

The lecture on manures was read by the assistant-secretary in the absence of Mr. W. G. Watson. The first place, as a manure for garden crops, was given to farmyard manure, which was found to contain all the essential elements of plant food, both organic and inorganic, and its varied composition made it by far the most perfect manure. The best method of treating it, so as to secure its maximum amount of plant-feeding constituents, was fully detailed, and the great source of loss pointed out when manure was allowed to lie in heaps and become fermented, its volatile elements escaping into the air and liquids allowed to drain off also. The manure made under covered yards was better, because there was less saturation by rain and evaporation. The temperature of the heap should never be allowed to rise above 150° F., and if there was any danger of this happening, the heap should be cooled down with water. As regards its application, the fresher the manure the less ready it was as a plant food, but in proportion to the extent to which it was well made, the more promptly could its fertilising ingredients be turned to immediate use. But although a perfect manure as far as it went, most cultivators were now agreed as to the necessity of other manurial aids which contained fewer elements in concentrated form, so that phosphates or nitrates could be applied more efficiently to growing crops that required one or the other in greater amount. The several manures now in general use were passed in review, and their nature and constituents briefly mentioned. The value of lime was particularly stated and enlarged upon, especially as a factor that more than anything else assists in breaking up or pulverising clay lands, whilst even light soils retained moisture better by its use upon them. A very interesting discussion followed. Mr. Odell explained an admirable system that he had seen of dealing with sewage, of which there was often much available at a time when gardeners had no use for it. This difficulty had been admirably met with in the instance quoted by passing it through a series of pits filled with leaves, so that all its elements became available for use in a solid way much preferable to using the liquid. Gas-lime, a plant poison badly used, he had found was also salvation to the Brassica tribe if rightly used, as upon ground dressed with it they enjoyed an absolute immunity from clubbing and its attendant evils. Mr. H. W. Ward, of Longford Castle, said he had found it advisable to use artificial manures for vegetable crops, especially Potatoes, which were not nearly so susceptible to disease as when grown in ground rich with fermented manures. In all his garden crops he got a cleaner and better produce.

Mr. Bunyard agreed with these remarks and also advocated Rape dust, which was much used in Kent. It was the residuum after the extract of the oil and was left in a hard cake, but if broken up into pieces about the size of a Walnut and mixed with an equal quantity of soil, there was no better manure for root crops, and it was an admirable stimulant to give to Asparagus just as it was commencing to grow in spring. An additional advantage in favour of its use was its cheapness.

THE NATIONAL DAHLIA SOCIETY.

The annual exhibition of this society was held at the Crystal Palace on September 6 and 7, and the gathering was a good representative one of all classes of this flower. The entries were somewhat less in number and the competition, especially among amateurs, not quite so keen as it has been on previous occasions. Some of this is due to the extremes of weather that have prevailed during the present season, as evinced also by the fact that one or two noted growers complained of their Dahlias being in a backward state and flowers not yet up to show form, whilst others who had them more advanced said the hot dry days that preceded the show had proved very trying and made it difficult to preserve that freshness of the flowers which adds so much to their effect on the show table. Some of the oldest kinds among the show flowers still maintain their high position, as, for example, James Cocker, of which many magnificent flowers were shown; indeed, it was rarely absent from the prize-winning stands. It is a deep purple self. Mrs. Gladstone also was conspicuous throughout the show, always easily distinguished because of its soft and lovely blush shade of self colour. Besides many fine blooms in the collections there were no less than seven stands of this kind in the class for six blooms of any light coloured Dahlia. The feature of the show, however, and one which appeals to and gratifies lovers of flowers generally, was the growing numbers and exceeding beauty of the Cactus-flowered section which now embraces a wider range of more brilliant colours with many tender shades. The society rightly encourages them, as doubtless through this class a fresh impetus will be given to Dahlia culture in gardens.

Show and Fancy Dahlias.

The best sixty blooms of these in the largest class of the show again came from that noted grower, Mr. Charles Turner, Royal Nursery, Slough. The exhibit was a good one, but the flowers generally were more irregular in size and finish than is usually the case. The finest were George Rawlings, Mrs. Langtry, Arthur Ocock, Chieftain, Penelope, Gloire de Lyon, a massive white self, J. T. West, Grand Sultan, James Cocker, Maud Fellowes, J. T. Rawlings, Diadem, David Sanders, Earl of Ravensworth, Pleasance, W. Garratt, Goldfinder, Mrs. Gladstone, Prince Bismarck, John Walker, and Shottesham Hero. Mr. John Walker, of Thame, was second with a nice lot, and Messrs. Keynes, Williams, and Co., Salisbury, third. The next class for forty-eight blooms, distinct, embraced the same varieties as were enumerated above, and Messrs. Turner, Walker, and Keynes, Williams, and Co. were successful in the order named. For thirty-six blooms, distinct, Mr. G. Humphries, of Chippenham, was an admirable first, showing a very regular and massive lot of flowers. The best were Queen of the Belgians, Glow-worm, Ethel Britton, Mrs. Gladstone, Duke of Fife, and Duchess of York. Mr. J. T. West, Tower Hill, Brentwood, was second, and Messrs. Saltmarsh, of Chelmsford, third. For twenty-four blooms, distinct, Messrs. Saltmarsh were first, Mr. West second, and Mr. G. Humphries third. The best twelve blooms in the show and fancy section came from Messrs. J. Cheal and Sons, Crawley, fine flowers of Mrs. Gladstone, W. Rawlings, G. Rawlings, Arthur Ocock, and John Walker being shown. Mr. Arthur Rawlings, of Romford, was second, and Mr. H. Harris, Chelmsford, third.

In the amateurs' classes of this section, Mr. Thomas Hobbs, of Easton, Bristol, showed well, securing first honours for twenty-four distinct blooms—Mrs. Gladstone, Earl of Ravensworth, Harry Turner, T. W. Girdlestone, Prince of Denmark, and Duchess of York, all very fine. Mr. Hewkes, Castle Bromwich, Birmingham, was second, and Mr. Anstiss, Brill, Bucks, was third. For twelve distinct blooms of show varieties only Mr. Starling (gardener to Mr. H. H. Raphael, Havering, Essex) was first, and Mr. J. Gurney Fowler, South Woodford, Essex, second. Mr. C. Jefferies, Chippenham, had the best six distinct blooms, Captain Lowe, Freshfield, Isle of Wight, being second. For twelve blooms of fancy varieties only, Mr. Anstiss was first, and Mr. S. Cooper, Chippenham, second; whilst for six of the same class the prizes went to Mr. A. Starling and Mr. Jefferies in the order named. The best six blooms of any dark Dahlia came from Mr. Charles Turner, who showed grand flowers of William Keith, Mr. Mortimer, of Farnham, being second with James Cocker. Mr. J. Walker was first for six of any light Dahlia, showing fine flowers of a white self that bears his own name. Mr. Mortimer was second with Mrs. Gladstone. The best six flowers of a yellow variety also came from Mr. J. Walker, who showed William Powell; and Mr. Mortimer was second with John Hickling. For six tipped blooms, Mr. F. W. Seale, of Sevenoaks, was first, showing Mrs. Saunders, a yellow, tipped with white, and a charming stand of blooms. Mr. Mortimer was again second. Mr. Humphries showed the best six blooms of any striped variety in Frank Pearce, Mr. J. Walker being second with Matthew Campbell. Mr. Walker was first for the best six edged blooms, Mr. J. T. West being second.

Cactus and Decorative Dahlias.

In the open class for eighteen varieties in bunches, six blooms of each, Messrs. J. Cheal and Sons were an admirable first for an exhibit of even character, the flowers delightfully fresh. They showed Purple Prince, Beauty of Wilts, orange-red; Mr. Barnes, salmon and yellow; Matchless, dark maroon; Kaiserin, rich yellow; Professor Baldwin, scarlet; Mrs. Wilson Noble, salmon-red; Delicata, rose-pink, with white centre; May Pictor, buff, shading to yellow; Mrs. Gordon Sloane, deep red; Countess of Gosford, orange buff; Bertha Mawley, rich crimson; Mrs. H. Cannell, orange; Lady Penzance, yellow; and Earl of Pembroke, deep purple. Messrs. Keynes, Williams and Co. were second, and Mr. Charles Turner third. The best twelve varieties, six in a bunch, were shown by Messrs. J. Burrell and Co., of Cambridge, their finest being Gloriosa, Major Haskins, Harmony, Robert Cannell, Earl of Pembroke, Countess of Gosford, and Mrs. Peart. Mr. J. T. West was second, and Mr. F. W. Seale third. The decorative varieties now receive less attention since the improvement and increase of the Cactus-flowered forms. Messrs. J. Cheal and Sons were first for twelve varieties in bunches of six blooms, Messrs. Keynes, Williams and Co. being second. In the amateur classes, Mr. J. Stredwick, Silverhill, St. Leonards-on-Sea, showed well, and secured first for twelve varieties, six blooms of each, the sorts similar to those that have already been enumerated. Mr. Brown, gardener to Mr. W. Morris, Oak Lodge, Horley, Surrey, was second. For six distinct kinds, Mr. E. Mawley, Rosebank, Berkhamsted, was first with a charming lot, Mr. S. Cooper, being second. For nine varieties of Cactus Dahlias Mr. J. Stredwick again came to the fore with a fine lot, Mr. Brown, Oak Lodge, being second. For four bunches of Cactus kinds sent out by Messrs. H. Cannell and Sons, Mr. W. Mist, Ightham, Sevenoaks, was the only exhibitor, and received first prize.

Pompon and Single Dahlias.

These were shown finely by Messrs. Turner, who were easily first for twenty-four varieties in bunches of ten blooms of each. The best were Nerissa, rose; Diana, pale yellow; Fabio, scarlet, shading to orange; Arthur West, dark crimson; Bacchus, bright red; Purity, white; Ganymede, rosy buff; Amber, deep yellow; and Captain Boyton, dark crimson. Messrs. Keynes, Williams and Co. were second, and Mr. F. W. Seale third. For twelve varieties Messrs. J. Burrell & Co. were first, their exhibit containing fine bunches of G. Brinckman, white; Emily Hopper, deep yellow; H. E. Searle, orange-red; and Red Indian, deep crimson. The second prize went to Mr. J. T. West and the third to Mr. G. Humphries. In the amateurs' classes for pompons, Mr. J. Hudson, Gunnersbury House Gardens, was first for six bunches, ten blooms of each. This was a neat and pretty lot, the varieties Mars, crimson; Golden Gem, rich yellow; Favourite, maroon; Apollo, light buff, with Leila and Eric, two fancy kinds. Mr. J. Stredwick was second. For six varieties in bunches of six blooms Mr. S. Cooper was first and Mr. G. Wyatt (gardener to Mr. G. Hilditch, Twickenham) was second. Messrs. J. Cheal and Sons showed the best twenty-four varieties of single Dahlias, in bunches of ten blooms of each, the finest being The Bride, white; Marion Head, rose, with white centre; Duke of York, orange-crimson; Miss Roberts, yellow; Demon, dark maroon; and Miss Henshaw, pale yellow. The second lot came from Mr. F. W. Seale. In the amateurs' class for six varieties Mr. T. W. Girdlestone, Sunningdale, Berks, won the first prize with a pretty lot, comprising Prince of Wales, crimson, shading to maroon; Golden Locks, yellow; Gold Dust, scarlet suffused with yellow; Kitty, blush and white; Dearest, a lovely kind variegated with transparent white and canary-yellow; and Soubrette, a bizarre flower of several shades. Mr. E. Mawley was first and Mr. W. Parrot, Sevenoaks, second in a smaller class. Fancy single Dahlias were shown by Messrs. Cheal and Seale, who were first and second in the order named.

Among new Dahlias, Yellow Globe, deep yellow; Hero, light orange-red; and Sepoy, dark maroon, were all fine flowers of the show type, exhibited by Mr. Harris, Scads Hill House, Orpington. Florence Tranter, blush, edged with purple, was shown by Mr. Tranter, Henley-on-Thames. Cactus varieties were numerous. Mrs. Stirling, crimson; James Hudson, deep orange-red; Mrs. Wilson Noble, salmon-red, a lovely shade of colour; Mrs. Montefiore, rich crimson, all came from Messrs. Cheal. Nil Desperandum, bronze-yellow, and Harry Stredwick, maroon-crimson, were shown by Mr. J. Stredwick, whilst Mr. Hudson showed a single-flowered Cactus kind named Adeline. Messrs. Pope, of Birmingham, sent flowers of a double crimson Cactus form named Ida Pope, whilst a yellow one named Marquis of Salisbury came from Mr. Grist, Freshwater, Isle of Wight. Messrs. Turner showed a fine stand of blooms of their new variety named Beatrice, which is of a most distinct rosy mauve colour.

The miscellaneous exhibits were large and good. Mr. T. S. Ware made another great display of Dahlias, boldly, though somewhat formally arranged, whilst Messrs. Dobbie and Co. made a large exhibit of Dahlias. Messrs. Cannell and Peed showed Dahlias and other flowers, Mr. M. Prichard a large group of hardy flowers, and Messrs. Laing, of Forest Hill, two fine groups, one of Gloxinias and the other of Caladiums.

MR. A. F. BARRON.

To the Editor of The Garden.

Sir,—As a Fellow of the Royal Horticultural Society of England, I claim the right of saying with what extreme surprise and regret I read the ambiguous and weak-kneed apology of the council in your last issue. As an explanation it is lamentably weak and unsatisfactory. The secretary's apology also obscures the main point of this affair by introducing details as to retiring allowance and testimonial, &c., about which we are all or nearly all agreed. The main point at issue is this: Granted that the council had every right to place their Chiswick superintendent on the retired list, did they proceed in the matter in an honest, straightforward manner? The general impression abroad is that they did not so proceed, but that they went about the business in a way suggestive of a secret conspiracy. It is the general belief (despite the frank expression of regret) that some mean and undignified methods were resorted to, and this feeling it is the business of the council to allay. Not only has the council ignored the Chiswick board, but it has caused a feeling

of deep distrust to spring up as to the future business of the society. What guarantee have the Fellows that matters will not again be mismanaged? Some of us would like to know if the present president and council really do their best for the society, or whether they allow the secretary to do as he likes. Let us have the whole truth of the miserable affair and done with it. Let us have the report and correspondence for what it is worth at once. As a matter of fact the council have either brought about the retirement of the Chiswick superintendent in a proper manner or they have not done so, and the best way of dispelling doubt and erroneous inferences will be to publish at once the whole of the correspondence and the actual report as signed. This is a plain duty the council owe not only to their own Fellows, but to every gardener in the British Islands as well. Not to produce the direct evidence asked for will of course only defer the matter until the next annual meeting. As it is, everyone interested is asking all sorts of questions about the unbusinesslike manner in which the affair was conducted. Surely it is not necessary for such a society to resort to any secret methods of procedure? The Royal Horticultural Society of England should be above suspicion, but at the present moment it is not in that desirable position, for there is suspicion in many minds as to the present and also doubts as to the future.

It is no use the council ordering the secretary to write plausible apologies that satisfy no one, but only intensify the spirit of distrust. Let the report and its attendant correspondence be published; that is really the best way to dispel misapprehension as to any unfairness or discourtesy.—F. R. H. S.

—— The letter of the council of the Royal Horticultural Society which appeared in your issue of the 7th inst. is plausible, but eminently unsatisfactory. The apology contained in the letter to the Chiswick Board is particularly feeble, but this does not much concern the Fellows, inasmuch as that body is the council's own creation. However, to say the least of it, the excuse in the letter is very extraordinary; not consulting the child "was due to an oversight," a thing hardly possible to have happened in a body of intelligent men. I am more inclined to the idea that it was not to the interest of the promoters of the "special committee" to consult the Chiswick Board, and as a Fellow I accept the excuse with a grain of salt. The Fellows have now to consider how far the honour of the society is involved in the secrecy of the council in appointing "a special committee to advise them as to the future of the gardens" when they had a standing committee for, I presume, the very purpose of advising them on all matters connected with the gardens, and if it was not doing its duty the council should have dissolved it, and then appointed a committee to answer the object they had in view; this would have had the virtue of being straightforward, but as the council has taken a tortuous action, they must also take the consequence of having created a feeling of uneasiness in the minds of many Fellows, which justifies the suspicion that there is a want of fair play generally. The treatment of their child was un-English; that to Mr. Barron was full of ingratitude and unhandsome. As to the remark of the council's "intention to promote a testimonial to Mr. Barron," it was well for the success of the testimonial and the credit of the council they did retire, as their action would only have been viewed as a "blind." Is there no chance of the Fellows bringing the council to see what valuable services they are sacrificing or induce them to produce the report which led up to Mr. Barron's virtual dismissal? We now know the names of the men who signed the report, and the council would consult their reputation by making this report public. If the council will not take action, I trust that one or other of "the special committee" will have the courage to make the facts known. Murder will out, and as there is no legal restraint, I feel sure there can be no moral one in such a case. One conclusion we may safely draw if the council still refuse to produce the report, is that it is clear the report is wanting in backbone, and what is hid under the cloak of the "special committee" would prove more damaging to the council's reputation than it could be to that of Mr. Barron. If the council fail to consult their reputation, then the Fellows must take action and appoint a committee of investigation, and this should be done promptly, as the advertisement is out for a new superintendent "possessing practical and scientific knowledge of all departments of horticulture." As a Fellow, I should wish to know if the council have made themselves severally and individually responsible for the pension of £180 voted for Mr. Barron, or how do they propose to raise the sum annually? as assuredly there will be a falling off in the subscriptions of those who look upon Mr. Barron's dismissal as a job. Then, again, the reference in the council's letter to "the desirability of making considerable changes in the gardens at Chiswick" might not be approved of by the Fellows—a not at all unlikely thing. This would lead to a further falling off in revenue. The new superintendent is to have £200, a salary which, added to the pension, makes a total of £380, as against £225 paid to the present superintendent, who possesses in an eminent degree the qualities the council are advertising for, viz., "practical and scientific knowledge of horticulture"; indeed, few men equal Mr. Barron in the knowledge that relates to horticultural science and practice. A correspondent signing himself "Lux," and who evidently can throw some light on the finances of the R.H.S., writing in a contemporary says, "the resources of the R.H.S. are limited." If so, where is the pension to Mr. A. F. Barron to come from, seeing this will entail an extra sum of £155 per annum? "Lux" evidently writes with knowledge, and may not be unwilling to answer this important question. There are wealthy men on the council; have they the courage of their convictions to guarantee the society's revenue to the extent of its expenditure, or the amount of the pension to Mr. A. F. Barron should the society be unable to pay him annually? If the wealthy members of council are not prepared to guarantee Mr. Barron his pension, why get rid of him, considering he is the most capable man who has ever had charge of Chiswick Gardens, and who has still ten good years' work in him. Mr. Barron has in the past met all the requirements of the most exacting councils, and I fear not he could fulfil all that the present council could get out of any other man, and especially an untried man. The risk is great, and the council must be told they will be held responsible for the results arising from any forced change. If the council are really consulting the interests of the Fellows of the R.H.S. and the advancement of horticulture, they would take the Fellows into their confidence, lay their plans before them, get their adherence and support, and should the change referred to not prove a success, the Fellows, having been partners to it, would not be unreasonable; but if a few men take so much responsibility upon themselves, no consideration must be made for their failures or their follies.—PETER BARR.

The weather in West Herts.—Another hot week and the fourth unseasonably warm week in succession. On one day the highest shade temperature reached 78° and on another 79°. On only one occasion has the latter temperature been exceeded in September during the previous ten years, and that was on September 11, 1891, when the shade maximum was 81°. Some of the nights were particularly warm, and on that preceding the 6th the thermometer exposed on the lawn never fell lower than 56°, which is an unusually high minimum reading for the month. On Tuesday last the temperature of the ground at 2 feet deep stood at 64°, and at 1 foot deep at 66°. The latter reading is about 7° in excess of the September average for that depth. Only insignificant amounts of rain have fallen during the last fortnight, except on the 6th inst., when about three-quarters of an inch of rain fell. This was during a rather severe thunderstorm. About 4 a.m. there occurred an exceptionally heavy downpour, exactly a quarter of an inch of rain falling in ten minutes. Since the beginning of the month the sun has shone brightly, on an average for 7¼ hours a day, which is a splendid record for the early part of September.—E. M., *Berkhamsted.*

Roses failing.—I am in a difficulty with my Rose house. I put in a good border of clay, manure, and old loam, which I planted with Teas, and up the roof I have climbers, but this is the second year in which I have failed to get any decent flowers. The buds are small and the plants look sickly, the leaves turning yellow and falling off. Can you tell me what is the cause? I have top ventilators and also box ventilators built into the walls.—W. R. F.

*** We do not see how you could possibly have treated your Roses better as regards soil and the formation of your house. The fault undoubtedly lies in the after culture. Has the temperature been very high during the early part of the summer, so as to scorch the growth? Have you overwatered with liquid manures, or allowed the border to become too dry? It is a difficult point for anyone who does not see the plants, and could ask a question or two upon the spot, to decide or even give a good suggestion as to the cause of failure. We should be glad if you could write again and say a little more about their culture, as it is clearly no fault of house or soil.—ED.

Adiantums unhealthy (*Newcastle*). — The fronds of Maiden-hair Fern sent are very small, and the plants, evidently enough, are in feeble health. Some cultivators are much too fond of pulling to pieces and repotting their plants. If it is desirable that the stock be rapidly increased in number, then dividing and repotting just when active growth commences in February or March are right enough, but there ought to be no overpotting. The finest plants, or those which produce the greatest number of extra good fronds, are those which are not repotted very often, every second or third year being quite often enough to shift the plants. When the pots are well filled with roots, soot-water or other only moderately strong liquid manure should be given frequently, and dryness at the roots not be tolerated at any time while the fronds are green. Excessive shade is not desirable, as this unduly weakens the fronds. What Adiantums like is an intermediate temperature, that is to say, something between the heat of a stove and the coolness of a greenhouse, a moderate amount of moisture in the atmosphere also being needed. Blinds should be run over the house or pit whenever the sun shines strongly on it, and if the plants are not crowded or frequently muddled about, they will thrive grandly. It is no uncommon occurrence to meet with plants 2 feet through in 9-inch, or even smaller, pots. A compost consisting of three parts of loam to one each of peat and leaf soil, with sharp sand added, is most suitable, but the peat may be dispensed with. Avoid souring the new soil by over-watering. Never resort to overhead syringing, and do not cut many fronds from feeble plants.—ED.

Names of plants.—*T. B. Durris.*—1, Ptelea trifoliata; 2, Euonymus europæus; 3, Rhamnus alaternus.——*C. Mangles.*—1, Momordica sp.——*E. E. Stevenson.* — Roses, 1, not recognised; 2, Mme. Chauvry; 3, Gen. Jacqueminot; 4, Mme. Lambard. Your Ferns are attacked with brown scale. The best way will be to cut off the fronds and burn them.

Names of fruit.—*S. H. G.*—Apple Lanes' Prince Albert.——*X. Y.*—Apples, 1, Summer Orange; 2, Tower of Glamis; 3, Lane's Prince Albert. Plum send when ripe.——*Danum.*—Apples, 1, Emperor Alexander; 2, not recognised; 3, Ashmead's Kernel; 4, Tower of Glamis; 5, Plum Cox's Emperor; 6, Jefferson.

No. 1244. SATURDAY, September 21, 1895. Vol. XLVIII.

"This is an Art
Which does mend Nature: change it rather; but
The Art itself is Nature."—*Shakespeare.*

ROSE GARDEN.

AUTUMN ROSES.

Although by common consent the Rose is the queen of flowers, the traditional error that associates it with the early summer months only is as yet all too common. If this is not so, why is it that we see scarcely any Roses at flower shows during the months of August and September, and that the inspection of gardens reveals a state of things not easy to understand and harder still to reconcile with the fact that the Rose of to-day is as much a flower of the autumn as it is of the summer, and even more delightful because more profuse in its later blooming? Nearly all the Rose growing that comes under the notice of the general public, and we might say absolutely all that is done by the many societies that are specially devoted to this flower, are based upon its past traditions and manifestly incomplete. The National Rose Society is a standing example of incapacity to realise or appreciate all that appertains to the title it assumes when it does nothing to show the general public the artistic aspect of Rose growing and the prolonged season of the flower's beauty, but contents itself with providing its votaries in the early Rose days with two or three opportunities of beating each other in the production of the biggest blooms—a very confined scope indeed for good and useful work, and quite inadequate as a means of representing the varied charms of Rose growth and blooming. All that is done publicly and collectively is identified with this aspect of Rose culture, and as far as the Rose societies are concerned, no autumn recognition of Roses is ever forthcoming. Roses there are, however, at the present time and in exceeding abundance. We are not inviting attention to a few lingering remnants that belong to a display of earlier months, but to a Rose picture, gay in refined colour, that gives effect without garishness, and that shows the fullest Rose beauty.

At the meeting of the R.H.S., held in the Chiswick Gardens last week, the great feature unquestionably was the large and beautiful exhibit of Roses in great variety made by Messrs. W. Paul and Son, of Waltham Cross, not of individual blooms set up in the conventional way, but bunches of many kinds, showing well what the Rose garden can yield at the present time. But even this display, admirable and instructive in its way, was but a faint foreshadowing of the autumn Rose beauty that we have since seen and enjoyed in the Waltham Cross Nursery.

One cannot certainly be accused of overstating the merits of the Rose as an autumn flower, or exaggerating its beauty when long lines and large breaks of well-known varieties are seen much more profuse in bloom than in the proverbial days of Roses. The lesson to be learned is to grow the best varieties and many of them, and then on a smaller scale, but equally as charming in a limited space, we may ensure Roses in abundance and picturesque effect What a waste of space, indeed, to be giving Rose bushes a square yard of ground each when the same area would take a dozen bushes of certain kinds that would hide the ground completely and cover themselves in lavish bloom.

It goes without saying that to all who know Roses the Teas are pre-eminent at the present time, and although they have been often praised in these pages, it is impossible to pass unnoticed such sterling kinds as Marie van Houtte, Anna Olivier, Mme. Hoste, Mme. Falcot, Mme. Lambard, Sunset, Catherine Mermet, The Bride, Adam, Marie d'Orleans, and many more well-known varieties. Here are garden flowers that appeal to and abundantly satisfy all the senses, and yet in a recent addition to Rose literature it was said that the Rose was full of shortcomings as a garden flower. Who at the present time would exchange a bed of Tea Roses for one of scarlet Geraniums? and if we have gardens for the enjoyment they give us, why not seek it to the fullest extent by growing the flowers we love best? Among the Tea Roses (in addition to those that are now recognised as standard kinds) we noted several others more or less of recent origin abundantly fulfilling earlier promises of merit. Kaiserin Augusta Victoria—not a true Tea, perhaps, but with all the attributes of the best of that class—will certainly grow in popular favour as its merits become known; whilst in Mme. Pernet-Ducher and Gustave Regis we have two essentially garden Roses, and they were prominent here, bearing huge heads of many flowers in a variety of stages and gradations of colour from the rich yellow bud to the white fully-expanded bloom. These certainly are two notable additions to the list of Roses that will make the garden gay at this period. Of dwarfer growth, but a picture at any time, and a Rose that will always furnish a bouquet of lovely buds is Mme. Chedane Guinoisseau, by no means new perhaps, but slow in receiving the appreciation it deserves. G. Nabonnand, again, would be tabooed by those who would have all Roses as full and solid as a Cabbage, yet what a beauty it is, and altogether unique in its colouring, its broad petals spreading out like those of a Tulip in the sun and delicately margined with pink, which fades imperceptibly away in the creamy white ground colour. Grace Darling, Viscountess Folkestone and Camoens are an indispensable trio that were much in evidence, as also were La France and its so-called white counterpart, Augustine Guinoisseau, which really has no resemblance to La France, but stands out conspicuous on its own merits as one of the freest, sweetest and most persistent of bloomers. Even on the Hybrid Perpetuals flowers were fairly numerous. But at this time of the year the Teas almost monopolise admiration. After these come the Monthlies, and here again what possibilities there are for autumn Rose pictures. There were other things perhaps as good, but assuredly nothing better at the time of our visit than a large break of the old pink China or Monthly Rose glowing with hundreds of blooms. With this, Fellenberg, Cramoisi-Supérieur and Mme. Laurette Messimy, what colour, fragrance and long-lasting beauty have we to make a feature of. Lastly, there are the Polyanthas, in which extremes truly meet, as they present the greatest flower profusion of all upon plants whose stature is dwarfed to a degree that would make them insignificant. The lines of plants even at this late date were quite smothered with flowers. They are not perhaps so important as the Teas and other kinds, but they are charming, and ably assist in filling up the very full measure of autumn Rose beauty.

Rose Maman Cochet is a Tea Rose that has a future before it. We have seen it in good form on several occasions this season, and in the Waltham Cross Nursery it is now carrying fine blooms. In form, substance, and lovely rose-pink colour it much resembles Catherine Mermet, but is besides endowed with a vigorous growth, as evidenced by the long strong shoots it has this season sent up.

Tea Rose Marie d'Orleans.—This Rose was conspicuous in the Waltham Cross Nursery, the bushes carrying many beautiful blooms. It is a strong grower, abundant bloomer, distinct in form and colour, and always good. By some strange oversight its merits are known to but a few.

Rose Christine de Noue.—This proves to be a first-rate Rose, and though not exactly new is of comparatively recent origin. Its flowers, full and finely shaped, stand up erect, are of a deep rose colour in the centre, shading to crimson in the outer petals, and deliciously sweet. It was raised and sent out by Guillot, and this fact alone is strong testimony to its high merit.

Rose Mme. Joseph Combet, raised by Bonnaire, is one of last year's new Roses which attracted our attention at Waltham Cross. At a first glance it might be mistaken for Gloire Lyonnaise, it having the vigour and erect habit of growth of that kind, but its flowers appear to be fuller. They are of globular form and cream-white in colour.

Rose Princess Alice de Monaco, one of last year's new Roses, has been very charming lately in the Waltham Cross Nursery. In form and exquisite colouring it reminds one very much of Mme. de Watteville, having the same Tulip-shapd bloom, whilst in colour it is cream-white shading to deeper yellow at the base, but the petals are beautifully margined and flushed with a tender pink shade.

Rose Clio is one of the Waltham Cross Roses, and a first-rate addition to the very limited selection of those that bear light-coloured blooms in the H.P. class. It has besides everything to recommend it as a garden Rose, above all being endowed with a vigour almost equal to that of the strong growing Dijon Teas. Some of this year's shoots are over 6 feet in height, whilst bushes several years old are of great size. One need not hesitate to plant a group of this kind in order to make a Rose picture.

Roses Bardou Job and Gloire des Rosomanes. — Among many autumn Roses now flowering these two are conspicuous alike in profusion and brilliance. The cooler days of autumn are better suited to them, and their semi-double flowers last longer at this season. Here, indeed, are two grand Roses wherewith to enliven and put a little colour into the flowerless shrubberies. They only want to be treated as shrubs and allowed to have their own way.

Rose Lorna Doone.—Bourbon Roses as a class are lightly regarded at the present day, with one notable exception, viz., Souvenir de la Malmaison. In Lorna Doone we have a Bourbon that deserves popularity, as it is undoubtedly a grand garden Rose, as truly perpetual as the old Malmaison. Two group this kind at Waltham Cross were as beautiful as any Rose in June, every plant bearing fine flowers in quantity and many buds yet to expand. It was raised by Mr. W. Paul. Its flowers are large, full and sweet, of a deep rosy crimson colour, and displayed to the best advantage upon a plant of vigorous growth.

Tea Rose Sylphe.—This is a new variety of Mr. W. Paul's raising, and one of decided promise. It has a sturdy and free habit of growth and flowers of medium size, borne erect on long, strong stalks, that adapt it well for cutting. In its exquisite shades of white and blush-pink it gives us a flower of the same lovely tint as that of Souvenir d'Elise Vardon, and is a welcome acquisition on that account, as few can do anything with the latter kind.

Rose Francis Dubreuil is a red-flowered Tea that appears to possess more than an average degree of merit. It is certainly very much better than most of this class, which have been offered all too freely of late, but growers wisely have

accepted but a few of them. Francis Dubreuil was raised by Dubreuil, and is being sent out this autumn. We saw it at Waltham Cross and were decidedly impressed with it, as its colour is a deep crimson-red shading to a darker hue in the outer petals, but there is no suspicious purple tint that makes so many red Teas dreary-looking. The flowers, too, are well formed and borne erect upon strong shoots. It is a Rose worth trying and we shall watch its behaviour another year.

Roses Duke of York and Queen Mab.—These are two most noteworthy additions to the as yet meagre list of first-rate Monthly Roses, both of them having been raised in the Waltham Cross Nursery, and they are now flowering well there. The Duke of York would seem to do as well indoors as out, for early in the spring of the present year Messrs. W. Paul and Son showed a group of pot plants of this variety in abundant bloom. If proof were wanting of its continuity it is forthcoming to the fullest degree, as we lately saw these same plants still under glass and bearing their fourth crop of flowers this season. Two round beds of Duke of York filled with this variety were also charming. The form of the flower and the exquisite variation of its colouring recall the Tea Rose Homère, but for open-air growth Duke of York is far ahead of that kind. The buds are of much better form than those of Monthly Roses generally, and in this state of a deep rose-pink colour, but they expand into flowers that shade to pink, curiously mottled with white. Queen Mab is of more recent origin, but we venture to predict that it will have many admirers. Its flowers are of a pretty form and tender colour, a pale salmon tint, flushed with pink and shaded with copper-yellow at the base. In growth and freedom of blooming it appears to be all that one can desire.

FLOWER GARDEN.

FLOWER GARDEN NOTES.

IT often happens in the case of newly-formed herbaceous borders that they cannot be filled the first year with permanent plants, and when this is so recourse is had for the first summer season to some of the most enduring of the annuals or ordinary bedding plants of a tender nature in such varieties as will adapt themselves the most readily to the surroundings. By the end of the present month these flowers will, however, have served their end and be decidedly on the wane, and so soon as an opportunity offers and they can be cleared away, the spaces can be filled in with those herbaceous plants that have been prepared for the purpose, such things, for instance, as Polyanthuses and Campanulas from seed, Pinks and Violas from cuttings, Carnations from layers, and others possibly from division. These are all front row plants, that are to be planted in bold groups towards the front of the border; the back and centre are more readily filled, for the simple reason that the plants occupying such positions are stronger growers, they quickly fill up large spaces of bare ground, and are, as a rule, nearly all amenable to propagation by division, an easy and expeditious way of increasing the stock when a few of each species or variety have once been acquired. In the case alike of seedlings, cuttings, layers, or divided plants, it will be found advisable to give a thorough soaking before lifting if the weather is inclined to be dry, and to perform the operation carefully with the view of preserving the roots intact. It is of little use taking the trouble to prepare a good plant if at lifting time it is to be dragged or pulled out of the ground. The spaces intended for autumn planting should, when the summer stuff is removed, get a liberal dose of short manure, be deeply forked, and well broken up. If it is decided to have a few clumps of Daffodils in the regular herbaceous borders, I should strongly recommend the choice of fairly high-class varieties; it is very seldom that they can be acquired in quantity for massing in the wild garden, but sufficient may be obtained for clumps of a size that will correspond with the surrounding groups of herbaceous plants. Half-a-dozen good ones would be Emperor, Empress, Horsfieldi, maximus, Sir Watkin, and Barri conspicuus. These rank among the medium-priced varieties, which everyone should grow if only in small quantities. They are sometimes mixed with Polyanthuses or Primroses, but I am not in favour of such a style of planting. It has an unnatural patchy appearance. It is better to plant them alone, covering the ground after the foliage is gone with some dwarf annual, or if a permanent carpet is required, with some of the dwarfest of the alpine Phloxes. One piece of work in the herbaceous border that must not be neglected when any plants are lifted for propagation is to see to the removal of any obnoxious weeds that may have found their way into the border. Some years ago I had given me a lot of herbacous plants to fill in the side of a hill that was to be planted with alternate clumps of these and flowering shrubs. The stuff was not thoroughly examined, but planted straight away as it came, with the result that the following season I had goodly crops of Prickly Comfrey, Couch Grass, Ground Elder and Bindweed. The experience thus gained taught me the lesson of shaking out, washing if need be all soil from the crowns and examining the soil for any objectionable subjects. Once planted the spreading capacity of the weeds above-mentioned is so great, that they are with great difficulty eradicated, especially if they have managed to establish themselves in the crowns of the plants. In some cases it is not altogether an easy matter to distinguish the root of the weed from that of the plant among which it may be entwined. That very objectionable pest, for instance, known as Ground Elder, is almost indistinguishable from the Alstrœmerias or Tropæolum speciosum. Also following up the idea of cleanliness and order, it may be noted that where borders are left a bit to themselves that is not kept too stiff and formal, stray plants are often apt to make their appearance, and these may be promptly and carefully removed. A judicious mixture is always welcome, but, as noted in the case of the Polyanthuses and Daffodils, anything patchy or unnatural is foreign to true flower gardening.

LIFTING TENDER PLANTS.—With September drawing to a close one can never be sure of the weather, and the early approach of frost being very probable, we finished last week running the spade round several tender plants with the view to their early lifting. A careful examination of the large-flowered Paris Daisies reveals the fact that they are this year quite free of the leaf-boring maggot, and a good batch of both white and yellow varieties will come up. They come in very acceptable for cutting when the frost has cleared the borders of outdoor flowers and stand well in water. If the plants are large, it is advisable to choose a dull day for the lifting, performing the operation carefully. Pot up directly, give a good soaking of water and stand them in the shade for a few days until they have recovered from the check caused by removal. If the small-flowered variety is grown, a few of this may also be lifted, for if the flowers are not so useful the plants will help to brighten the conservatory until the Chrysanthemums are ready, and may also be employed for various purposes. Nice plants from a good strain of Margarita Carnations may also be potted up; those from late sowings will now be just coming into flower and be bristling with flower-buds. Care must, however, be taken on no account to put them anywhere near the pot varieties (either winter or spring-flowering) if there is any sign of disease on them. I heard of a case last year where the disease was believed to have been transmitted to choicer kinds by bringing in a lot of Margarita. The inference may have been wrong, but it is as well to be on the safe side. Cannas, with their striking foliage, often come in very handy where the supply of large Palms and Dracænas is not extensive, and a few of the best and most shapely can be lifted, also the best of Grevillea robusta, if provision has not been made to grow on a supply in pots. It may be noted before leaving this subject that if there is anything in the way of bedding stuff of which the stock is limited, and of which sufficient cuttings could not be secured, it will be well to lift and pot a few plants from which cuttings can be taken in the spring. A good supply of dwarf Ageratum can often be secured in this way when the amount of cuttings obtainable in the autumn is very small. It is a good plan to look through beds of seedling Petunias and Verbenas to see if one has anything special; sometimes one or two may be considerably in advance of existing varieties, and the old plants may in this case be also potted up.

LOBELIA CARDINALIS AND L. FULGENS.—As the time for lifting these (where they are growing in situations rendering their removal necessary) is now close at hand, I should like to ask correspondents who annually complain of losses whether water is given through the winter months, as on comparing notes with a friend—who also said three parts of his stock was generally missing in the spring—the question of water or no water seemed the only point of difference between us. My plants are put into ordinary border soil that is fairly moist as thickly as I can pack them, and do not get a drop of water until they are pulled to pieces and re-boxed in spring ready for a start. It may perhaps be hardly necessary to give the reminder that before the approach of frost all plants of a permanent character at all tender that have helped in the summer flower garden should be housed, and those that are getting a bit leggy, such as the green-leaved Dracænas, Ficus, &c. (which may be improved by the stem rooting in damp Moss and the consequent cutting over and potting of the newly-formed plant) should be stored away thickly pending the operation.

Claremont. E. BURRELL.

NOTES ON HARDY PLANTS.

Megaseas.—It would seem that to be loyal to the "Kew Hand-list of Herbaceous Plants, 1895," this generic name is to become obsolete, and this section of plants is to range under the generic name Saxifraga, as of yore. No doubt the best of reasons—botanical—can be given for what has been done, and it must be quite right; still, it is equally true that these changes—and especially such as the present change—are most inconvenient and even impracticable for trade list purposes. However loyal tradesmen may desire to be, it takes years sometimes to alter a set of names; and here, almost before Megasea had become generally recognised, it has to be struck out and the species must go back to Saxifraga. The question is, what can be done? for if the name Megasea was an error, nobody can fairly object to the correction in the Kew list. But it may be useful to point out that the most painstaking of tradesmen have great difficulties in trying to keep pace with these changes, and many have grown so tired of the alteration of names that they do not care to follow it. This is all worthy of the consideration of botanists, for few will dispute the fact that trade lists are those most commonly read and quoted by gardeners. In other words, excepting where the errors are great or genera become too comprehensive, plantsmen should be taken into the confidence of botanists, and changes, other than those absolutely needed, should be avoided, as where an existing name will do let it alone rather than change for another, though perhaps a little more proper. A method aiming at uniform nomenclature can only defeat its own object unless the trade prints can be brought into harmony with the botanical ones within a reasonable space of time, *i.e.*, as regards names being changed.

Primula Rusbyi.—This rare American species is one of the last of the hardy species to flower, and it is blooming now. In every way it is a pleasing Primrose, habit neat and distinct, foliage so sharply toothed as to be almost spiny; flowers of a distinct and bright amaranth-purple,

intensified by the farinose scapes and calyces. The latter have thin divisions, so narrow and pointed as to resemble silvern lines on the coloured corolla tube. The trusses of flowers are one sided in the way of the common Auricula, the pips being about two-thirds the size. I have found the plant somewhat tardy during an experience with it of six years, but since I used Moss with the compost I get it on more quickly.

Lathyrus maritimus.—Though a British species it is not a common one, and it is by no means a commonplace plant for the garden. Used properly on the rockery or on sunny banks it is charming. Its flowers are rose and purple of bright hues, borne in neat drooping bunches, lasting a long time, both individually and in succession. The stems, of moderate length, look best when allowed to run on the surface or hang over a broad ledge of rock. The thick and glaucous foliage, almost blue, is spreading and flat, with the leaflets so obtuse as to be practically round. For a Pea its habit is compact. I have grown it many years, and by the way it attracts notice I should say it would be a plant that would have many admirers.

Lathyrus latifolius Turneri.—A specimen on a sunny bank and about three years old is now a glorious mass of bright fresh herbage and striking rosy red spikes of numerous big flowers, in these respects excelling the type, but its chief point of superiority is its greater profusion of blossom. It is probable some might take it for a better specimen of the type only, but seen side by side its distinctions are obvious. The stems are shorter-jointed, and as every joint produces a big bunch of flowers, the plant, which is 9 feet across, may be readily imagined to be a gay object.

Woodville, Kirkstall. J. Wood.

POMPON DAHLIAS.

New varieties come less freely than in the Cactus section, but there is in the pompon strain less of room for improvement, so perfect in form and doubleness are the established varieties. Really there seems no room whatever for development in form or doubleness, and novelties exhibit chiefly new or diverse hues of colour or markings. It is, however, noteworthy that the best or prettiest and for cutting most useful flowers are those of self colours. I noted with special satisfaction in this section of flowers at the recent Royal Aquarium show that the judges selected the smallest blooms for the best position. On the whole, in the other collections size in these flowers was less apparent than was seen in some previous years. Let us hope that henceforth large pompon flowers will not be staged or, if possible, even grown. The charm of these lies in the fact that they are miniature reproductions of the big, massive show flowers, and if relatively just as rotund and as solid, nay even formal, yet their very littleness serves to excuse much that it is not easy to overlook in the large-flowered sections. Whilst we admire the round balls of petals which make up flowers of a Viburnum, we cannot very well refuse to appreciate the less stiff and far more vari-coloured double flowers of pompon Dahlias. It is sometimes suggested that these Dahlias made good summer bedders. From the purely massing aspect in flower gardening that is so, but they are best planted here and there in shrubbery borders if to be decorative, or if wanted only to furnish flowers for cutting, then they should be planted in some out-of-the-way corner of the kitchen garden. The modern method of exhibiting Dahlias of the smaller-flowered sections in bunches of six by the aid of wire frames is no doubt helpful in securing each flower in position and enabling each one to be readily seen. So far that is well. None the less, the method does not commend itself to those who desire to see flowers gracefully arranged, and we may well hope that wire frames of this description will never be tolerated in association with Chrysanthemums. Whilst a mere wire support to weak-stemmed flowers is not objectionable, I am not sure whether it may not be possible with the aid of a little wire round the stems to exhibit all Dahlia flowers much more pleasingly than any other method admits of. A. D.

ERITRICHIUM STRICTUM, OR NOTHOFULVUM?

A most beautiful and continuously free-blooming hardy annual was sent to me under the former of the above names in the spring of last year by the Rev. Theodore Marsh, whose beautiful hybrid Lachenaliæ were figured in The Garden on Sept. 29, 1894. He wrote to me when sending the seed that it had deep blue flowers, and that being perfectly hardy it required no special care, and usually sowed its own seed freely all round wherever it grew, so that by transplanting the seedlings in the spring it could be made use of wherever a border of blue flowers was wanted in the garden. I transplanted my self-sown seedlings accordingly this spring round one of my beds of M. Lemoine's hardy hybrid Gladioli, where they have bloomed continuously and most profusely during the whole summer, and have been much admired by all visitors to my garden, to none of whom was the plant known, and nearly everyone asked for the name and wished to know where he could obtain seed of it for next year's bloom. The small deep blue flowers, which are produced in groups of two or three all up the long flower stem, exhale a strong perfume somewhat resembling that of the common Lime tree, and during the sunny hours of the morning they are covered with flies, bees, and other insects, who seem to find their odour very attractive. I have not been able to find either name in any of my botanical books of reference except the great "Index Kewensis," where both are mentioned. The horticultural dictionaries only mention one species of the family, the pretty little turquoise-blue-flowered alpine trailer, Eritrichium nanum, so difficult to manage in British gardens. I sent some flowering specimens of my plant to a London nurseryman, who tells me he sells seed of it under the name of Eritrichium nothofulvum. On referring to the "Index Kewensis" for the second specific name above mentioned, I find it is said to be synonymous with Plagiobothys nothofulvus. I also sent flowering specimens to the herbarium at Kew for identification, and the learned botanical authorities there informed me that it was not an Eritrichium at all, but apparently a member of the Hound's-tongue family, Cynoglossum furcatum, figured by Wight in his "Illustrations of East Indian Plants," vol. iv., plate 1395. I hope that some of your readers will recognise and be able to give the correct name of this plant.

W. E. Gumbleton.

Androsace sarmentosa.—Reference is made on p. 101 and again on p. 175 to this Androsace as well as to others. I manage this variety well by layering, as it were, the runner-like growths that so freely push from the base of the plant. Instead of pegging them down to the soil I lay a small piece of stone upon the stem of the runners, and the cushion-like growth springs up close to it. The stones retain the moisture in the soil, which this plant enjoys, without keeping the foliage continually wet.—E. M.

Hollyhocks.—It is disappointing to find so few of these noble border flowers in gardens. Relatively a far finer display of them is sometimes seen in a good cottage garden than in a large garden. The disease which used to present so much trouble to Hollyhock growers has not been so harmful of late, and there can be no doubt that the sowing every year of a good strain of seed the old plants so soon as they become weak being rooted out and burnt, helps materially to baffle the fungus, owing to the young plants having so much more vitality. It is not too late to sow seed now in pans or shallow boxes stood in a frame or greenhouse. Then, later, either prick out the seedlings singly into small pots, or thinly into boxes or pans, winter them in a frame and they will be strong to turn outdoors in April. As a rule, such plants will bloom finely in the autumn, and the following year even more so.—A. D.

Cestrum Parqui.—This is the hardiest of all the species and is grown quite without protection in the Jardin des Plantes of Paris. Here it is planted at the foot of a wall, where it attains a height of about 4 feet, producing a large number of panicles 7 inches or 8 inches high, with flowers of very pale yellow. The corolla tube is three-quarters of an inch long with starry rays spreading to a diameter of half an inch. The leaves are lanceolate and the entire plant is glabrous. It is a little-known plant, a native of South America, and of interest to collectors of hardy plants.—R. I. Lynch, *Cambridge.*

Papaver glaucum.—Of all the annual Poppies not yet improved by the florist, this is no doubt the most gorgeous. It grows about 2 feet high and has very distinct glaucous leaves quite unlike those of any other species. The flowers are each about 3 inches across, and while the outer petals expand, two of the inner ones curve like shells over the essential organs in the centre, which they protect. These petals have each a black blotch at the base, but the flower otherwise is intensely scarlet. It is known as the Tulip Poppy and is a native of Syria.—R. I. Lynch, *Cambridge.*

PHLOXES AT CHISWICK.

It is a long time since we have had an opportunity of inspecting a full collection of Phloxes such as that which has been got together and grown at Chiswick this year. It would be a gratifying result of this trial if it gave an impetus to Phlox culture in private gardens where we rarely see this fine flower well grown, although it has a brightness and force of colour that we can ill afford to shut out of our gardens in late summer and early autumn. As might be expected in so large a collection, there are some duplicates and not a few varieties too much alike, but there are besides some kinds of sterling merit that we have endeavoured to select and enumerate for the guidance of planters. If those mentioned below are added to the selection previously given in The Garden for August 10, p. 99, a choice lot of the finest varieties extant, and which deserves good culture in gardens, may be secured. Embrasement has large flowers of a clear cerise-red colour, and the habit of growth is dwarf and sturdy, whilst Alexander Shearer, a dwarf free kind, has fine self-coloured flowers of a bright red shade, most effective and beautiful. Neptune has flowers of a lovely soft rose shade, whilst its habit is dwarf and free and the flower-trusses large. Granville, with flowers of the purest white, is charming, and noticeable for its sturdy habit and dwarfness, bearing immense trusses of bloom on strong, erect stems. Faust, also white, is varied with a soft pink eye, the flowers individually large and lovely, whilst in freedom of blooming it is all that can be desired. Leonnie is fine, with large flowers and trusses, in colour a deep rose, with a small dark crimson eye that imparts a special richness to its effect. It is of medium height and very free-blooming, whilst the same may be said of W. Robinson, which is one of the best Phloxes, and should be included in the smallest collection. Its flowers are very fine, of a clear soft rose-pink colour, with a darker eye, and the lateral trusses, together with the terminal ones, make a great display of bloom. Etna must not be omitted, for although not new, it loses nothing by comparison with any in the collection, and has few equals in its own glowing red shade.

SHORT NOTES.—FLOWER.

Cactus Dahlia Lady Penzance.—This is a first-rate variety. The form is very beautiful and the colour (yellow) soft and clear. The blooms are medium-sized, freely produced, and the plant remarkably dwarf and bushy.—H.

Physalis Alkekengi.—I note on p. 196 reference is made to this Winter Cherry not having yet

coloured, but remaining still green. Here we have much of it in various situations, and in all cases quite half of the calyces are already beautifully coloured.—E. M.

Cactus Dahlia Mrs. Peart.—I am disappointed with this variety, which has been much talked of as the finest pure white of true Cactus form. It appears to me to be neither. The form is confused and the centre badly filled; the colour is really a lemon-white. Whether it will produce good blossoms by severe disbudding I am unable to say. For general culture the variety cannot become popular.—H.

KITCHEN GARDEN.

SPRING-SOWN ONIONS.

AT some of the west of England shows the judges have decided against awarding prizes to Onions shown as "spring sown," but which obviously were raised under glass and planted out, thereby reviving and giving prominence to an old grievance among gardeners and cottagers. I hold that a mistake was made by those judges, and an injustice was done to several deserving exhibitors. If the schedules expressly stated that spring-sown Onions must be raised in the open the case would be different, but it is merely stipulated that these should be spring-sown, and who shall say when spring commences? Even if March 1 was defined as the first day of spring, it would be possible to raise the plants under glass, plant out, and surpass those grown where sown. Not only have I frequently advised gardeners and cottagers to raise a stock of white Spanish Onions in boxes under glass and plant out when about 4 inches high, weather and state of ground permitting, but I have also done my best to persuade market growers to adopt a similar practice on a large scale. It has been found to pay remarkably well in America, and why not in this country? Light, glazed, heated houses would be preferable to frames for the purpose of raising the plants, the simple plan of sowing somewhat thickly in boxes being adopted. If the seed were sown early in February, by the end of March or early in April all could be cleared out and a crop of Tomatoes follow. At first sight so much extra labour and expense may seem altogether unnecessary, but when it is seen how much less seed is required; how evenly and quickly the ground can be cropped; how much less likely these early raised plants are to be damaged by the Onion grub or over-run by mildew; how much finer and handsomer the generality of the roots become as compared with any sown in the open; and lastly, how much more surely perfect maturation takes place, there will be few objections raised. As far as the south of England is concerned, I am of opinion that poorer crops of Onions were never seen. Exceptionally hot and dry weather early in the summer effectually checked the growth of the bulk of plants raised in the open, but before they formed "bulbs" rainy weather set in and growth recommenced, the result being large breadths with scarcely a well-matured root among them. Where left untouched the majority are still very green and erect, maturation apparently being far off, while drawing early and attempting to harvest artificially will meet with but scant success. There is, therefore, every probability of their keeping badly and an early break-down in the supply taking place. In many cases there are no signs of bulbing, and all such Onions I advise leaving where they are, or else that they be transplanted elsewhere. They will withstand a moderately severe frost, and may prove very acceptable in the kitchen next spring. Compare the crops of Onions grown where sown with those raised under glass and planted out, and the verdict must be altogether in favour of the latter. There is scarcely a small or an indifferently matured root among the latter, and so much have several intelligent cottagers been impressed with the superiority of the plan, that they have decided to sow no more Onions in the open—at any rate other than in the autumn. They raise their plants in frames. The plan should be encouraged, not discouraged.

W. IGGULDEN.

Kidney and round Potatoes.—There is much in what "A. D." says (p. 178) anent the difficulties of classifying some sorts of Potatoes. At a recent exhibition where I was judging, the finest dish of kidney Potatoes was Satisfaction, and in the round division this variety also was by far the best dish. Here was a difficulty. How could this Potato be set up as an ideal kidney variety and also be shown as a round? As the Potato shown as a kidney more resembled a good form of that type, this was awarded premier honours, while the other dish was passed.—E.

The seed crops.—It is to be feared that the seed crop of 1895 will be much below the average. In travelling through various seed-growing districts a few days ago I could not help noticing how very short the stems of seed Onions were, the heads, of course, being correspondingly small. This is due to the great drought, which came just at a critical period of growth. Beet will, I fear, be poor both in bulk and quality, owing to a late growth and a deficiency of root moisture, and the same may be said of Mangolds. I notice also in the Bedfordshire districts that Coleworts intended for early winter consumption were looking very blue and stunted, the ground not having been sufficiently moistened after the removal of Peas and Beans to give the roots a fair start. A noted London seedsman told me that the earlier varieties of Peas were harvested in a fairly satisfactory condition, but that he feared later sorts would be inferior.—J. C.

Tomatoes.—Amongst varieties or assumed varieties, for differences are very minute with many, that have recently come to the front is one named Polegate. It is a fine deep-coloured selection, from Perfection no doubt. I find it is held in great favour by some growers of vegetables for exhibition, for it furnishes handsome samples. Still, I have seen plenty of the Perfection type in past years quite as good as Polegate now furnishes. The variety was shown well at the Crystal Palace fruit show last year. A few dozen selected fruits on a show table, however, barely convey all that it is desirable to know concerning Tomatoes, because there remain the subjects of cropping, of flavour, and density of flesh. We have not yet reached to the point of testing Tomatoes as we do Turnips, Beet, &c., to ascertain quality of flesh, but I think it is nearly time we did. When the core cuts pale in colour and the seed pockets are large, then the fruits are far from being meritorious. A very good test is found in cutting fruits through from the stem, but the best is found when the cut is transverse, as then all the weak features of the fruits are fully exposed. I think we cannot well give too much weight to colour and solidity of flesh. The present season bids fair to be a record one for outdoor Tomatoes, for the crop is remarkable and will generally ripen well.—A. D.

Cauliflower Eclipse.—To fill the breach between the midseason and autumn Cauliflowers the one above named is of great value, and but for this I should not now have any for use. It is very similar in its style of growth to the well-known Autumn Giant, and may very easily be taken for that kind by those unacquainted with it. The latter variety is a great favourite among exhibitors for the autumn and late summer shows, and one having the same characteristics that will be ready for use in August from an outdoor sowing made in March must be welcomed by exhibitors and others. It is true there are other kinds quite as reliable for autumn use as the Eclipse; still that does not detract from the value of the one under notice, because the Autumn Giant type is not so liable to go blind as the smaller growing summer kinds, nor lose colour so quickly when fully grown, because they are protected by the upright and ample foliage more perfectly than in others well known and valuable for the summer months. Unless the Autumn Giant is sown very early in the year it cannot generally be depended on to mature early in August, but with this sort there is no difficulty in having matured heads at the time named from an ordinary March sowing. There is no doubt that this variety will become popular when its merits are more widely known among all classes of cultivators, and it is certainly deserving of extended cultivation.—W. S.

Shallots.—The true old Shallot, in the rage for size, seems to be in danger of getting pushed out of cultivation by the large red Jersey variety, which is much less handsome and not possessing in so high a degree that pleasing piquant nutty flavour which characterises the true Shallot. The Large red is of almost as coarse texture and appearance as the Potato or underground Onion; indeed, one often sees at shows bulbs that are sent as Shallots, but which are suspiciously like this root. I find Shallots are grown very largely indeed in cottage gardens and allotments in Surrey, but the Jersey is the most predominant. Some of the handsomest bulbs of the true form I have seen were shown the other day by cottagers at Shrewsbury, the best samples being singularly fine of their kind, clean, smooth, and handsome. It was very interesting here to note, for there were probably thirty dishes staged in one class, that the judges selected for the first prize large and far from clean or pretty Jerseys; then most oddly they went to a beautiful sample of the old Shallot, not one half the size of the Jerseys; then they again, with curious inconsistency, went to the large Jersey; and then fourth to pretty old Shallots; and fifth and sixth to the large Jersey again, making confusion of awards worse confounded. I hope the Shrewsbury committee will next year make separate classes for both forms, and thus prevent such contradictory awards from being again made. I venture to hope also that wherever both varieties are shown in the same competition, the undoubted high quality of the old Shallot will not be overlooked in presence of the bigger coarse form of the large Jersey.—A. D.

Potato Boston Q.Q.—This modern Potato, which claims quality and quantity as its title, is, under a trial given it here, quite deserving of its name. The yield from 5 lbs. planted in April was 110 lbs., and as the seed was necessarily cut, through being so large when purchased, I think the quantity was very satisfactory, for, no doubt, had the seed been of an uniform planting size, the same weight would have given a much larger yield. The tubers, many of them, were large and distinctly handsome in shape, the fault, if any, being found in the depth of the eye, which is more pronounced than in many fashionable Potatoes now. The quantity of tubers of seed size produced is very small, and no trace of disease was found when lifted. Quality depends entirely on soil and cultivation, but in ours, which is not famous for producing high quality, there is no fault to be found with it, and no doubt, in good Potato land, it would prove a first class sort in every respect. In the haulm it is of medium strength, a point favourable to small garden and field culture where wide planting is not generally practised. Those who have an interest in planting new kinds with a view to proving their respective merits would do well to give Boston Q.Q. a trial, and if the results generally equal those obtained under its first trial with me it will become a favourite. It is a white-skinned and bright-looking tuber, and ought to make a very good addition to the many exhibition sorts of Potatoes.—W. S., *Trowbridge.*

Stove and Greenhouse.

EUCHARIS GRANDIFLORA.

In most gardens the attempt is made to grow a batch of Eucharis grandiflora, or E. amazonica, as most often termed, but only in a few cases are the plants to be seen in such an admirable condition as in the illustration accompanying these remarks. Nothing proves more vexatious than a sickly batch of this Eucharis, while, on the other hand, a healthy group is a source of pride to the grower. Those who fail attach all the blame to the Eucharis mite; those who succeed snap their fingers at the latter, and consider it a bugbear that to them has no terrors. Without wholly agreeing with the latter, I am yet disposed to think it less difficult to contend with than many gardeners seem to think. Once the plants get into a sickly, unhealthy state, the mite takes possession of the bulbs, and the chances are no further healthy growth is ever made. Gardeners are very fond of shaking out and repotting their bulbs, and once too often the "pitcher goes to the well." Shaking the roots clear of soil and repotting were long thought desirable, if only with a view to cause the bulbs to flower soon after, those responsible quite overlooking the fact that the same bulbs would have flowered, it may be, a few weeks later if not excited in that way. Under favourable conditions these repotted bulbs soon recover from the check they receive and make good progress, but should they be neglected or be given sufficient water to sour the soil before the roots have a chance to well occupy it, the mite and its destructive habits are soon heard of. Some of the finest pots of bulbs I have ever seen were the offspring of a single bulb, and no shaking clear of the soil was ever practised. Sometimes, instead of one strong bulb being started in a 4-inch pot, three are placed in either a 5-inch or 6-inch pot, and from these they are gradually shifted into larger sizes. Those who are wise are in no great hurry to give their plants a shift, and when they reach the size shown in the photograph it is not often they are shifted into larger sizes before the roots actually crack the pots in which they are confined.

When the plants are sickly and mites are swarming between the scales, a somewhat different method of procedure is desirable. Cut off the leaves, as they hinder, rather than forward, root action; remove the outer scales from the bulbs, and soak for not less than three days in a strong solution of Gishurst compound, lemon oil used at the strength recommended by the vendors also answering well. In my opinion, however, clear water is equally efficacious, always provided the bulbs are wholly and constantly immersed in it for three days; but this remedy never seems drastic enough to those whose plants have been long troubled with the mite. Re-start either singly or in groups of a few bulbs in small pots rather than in 10-inch or larger sizes. Use a compost that will not readily sour, a mixture of two parts of good fibrous loam to one of the best leaf-soil procurable, with sharp sand, charcoal and a sprinkling of burn-bake added, being suitable. When they want manure it can be given them in a liquid state, and the two last-named constituents will both ensure porosity and prevent souring. Give the sickly bulbs the benefit of a fairly brisk bottom-heat, and do not water beyond what is necessary to keep the soil from becoming very dry. When root action is going on briskly, give more water and gradually raise the pots to the surface of the bed. It is the plunged plants that are most likely to suffer from over-watering, and worms are very plentiful in many old hotbeds. The pots should be arranged on a slate bench or slate-covered staging and ashes on this, the latter being kept constantly moist. In the temperature of an ordinary plant stove the pots arranged on a staging get quite as much bottom-heat as they need.

It is possible to flower well-established plants of Eucharis three times in the course of a year, and a knowledge of this fact has been the forerunner of very many failures. One method of causing the bulbs to flower at a fixed date has already been alluded to, and another consists in placing the plants in a lower temperature than previously grown in, drying off also forming part of the resting. After this enforced rest a sudden change to a strong heat and moist atmosphere causes flowering to take place very quickly, but this somewhat unnatural treatment not infrequently leads to an attack of the mite, or, at any rate, greatly weakens the bulbs. After a crop of leaves is fully matured a rest is desirable, but this can be accomplished without moving the plants. A rather lower temperature and less moisture should be given for three weeks or longer, when a sudden increase in the temperature and more water at the roots will rush up the flower-scapes in profusion. Unless a heavy supply of bloom is required at some particular time, there need be no special measures resorted to. When the pots are full of roots and the foliage healthy there will nearly always be a few or many flower-scapes showing, a sudden change from dull to bright days frequently stimulating flowering on a large scale. The plants will require assistance at the roots, and nothing answers so well as clear soot water.

The greatest importance ought to be attached to the preservation of the leaves in a healthy state. They are more sensitive than they appear to be. Too much sunshine is most injurious, and neglecting to shade in good time has been the cause of wholesale losses of leaves. I find a covering of Stephanotis floribunda, with a blind run over on hot clear days, none too much shade for Eucharis, and each time pot plants were shifted to less well-shaded positions they have suffered badly. Mealy bug and thrips are terrible scourges, and both have been the ruin of innumerable plants, outdistancing the mite in this respect. Any insecticides I have ever tried that were powerful enough to destroy these insect pests were also capable of ruining the Eucharis foliage. Sponging



Eucharis amazonica. From a photograph of a group in Mr. G. A. Turbutt's garden, Ogston Hall, Alfreton, by Messrs. Seaman and Sons, Chesterfield.

is the remedy for both, but it should be done with moderately hot soapy water, and not a strong insecticide. W. IGGULDEN.

Lilium neilgherrense.—Out of a number of bulbs of this Indian Lily imported last spring a few flowered quite early in August, and now there are several others in bloom, thus anticipating their usual season of flowering, for they may sometimes be had till nearly Christmas. No particular treatment was given to bring about this result, as the bulbs were simply potted and placed in a cold frame, then as they started into growth early in the summer they were plunged outside till the buds were on the point of expanding. This is certainly a very distinct Lily, and valuable too from the fact that it is the latest member of the genus to unfold its flowers. The long tube-shaped blossoms are generally more or less of a creamy tint, but in this respect they vary somewhat, as they do also in the length and size of the tube, some being narrower than others. Occasionally, too, a flower will be found slightly suffused with purple on the exterior. Though this Lily as a rule flowers when there are none of its class to compete with it, yet it is not often met with, owing no doubt to the fact that the bulbs are always comparatively dear. The reason of this is it does not succeed under cultivation, hence continual importations are necessary. True, the bulbs flower well the first season, but the following year the display is much less, and after that the yield of blossoms cannot be depended upon. Although the whole of our bulbs were subjected to the same treatment, yet some of the plants are only just showing their buds, while in the case of the earliest the flowers are already over. The flowers of L. neilgherrense emit a very pleasing fragrance, quite distinct from that of any other Lily. Even when shrivelled on arrival the bulbs of this Lily soon recover their plumpness if potted as soon as possible in fairly moist soil. From the time of the year the blossoms expand it is essentially a greenhouse plant; indeed that amount of protection is necessary in order to ensure it passing unscathed through the winter. The blossoms of this Lily are thick in texture, and remain in beauty a considerable time, especially when they open later on, and the weather is consequently cooler than it is at present.—H. P.

Primula obconica.—It will be remembered that a considerable number of letters have appeared from time to time in connection with the above Primula, setting forth the inconvenience caused to many who had the handling of it in the way of great irritation of the skin, intolerable itching, &c. An experience that came under my notice the other day goes a lot further than this, and proves that Primula obconica may be a very objectionable, and even dangerous plant. A lady who takes a considerable amount of pride in her window plants had some half a dozen of the Primula given her, and seems to have paid a lot of attention to them in the way of picking over, tying, &c. Some month or so after the Primulas had been in the house their owner had a very aggravated form of the obconica disease, the itching being accompanied by pain, large red blotches appeared, and face, hands, and arms were very much swollen. Local medical men could make nothing of it, and the hospital authorities, who were at length applied to, were equally at a loss, the usual suggestion after seeing the patient for the first time being that it was a hereditary skin disease of a peculiar kind. At last someone (after the expiration of some months' attack), happening to be aware of the reputation of the Primula, suggested its removal, and, free from all contact with it, the patient quickly recovered, and has been quite exempt from any sign of the visitation. I thought it might be as well to note the matter in THE GARDEN columns, in case there are experiences of a similar nature. Will any correspondent who has had personal experience of trouble with the plant kindly say if it has been satisfactorily proved what part of it causes this skin disease? I was always under the impression that it was the foliage, but was assured the other day it was the pollen from the flower. As it is a good plan to ventilate the fact that a peculiar affection of the skin is caused by the plant, it is also advisable to know exactly how it is caused. I have grown it here for years without anyone who has had anything to do with it being inconvenienced in any way.—E. BURRELL, *Claremont.*

Lilium Maximowiczi.—This Lily has certainly been liberally treated in the matter of names, for besides that at the head of this note it is also known as L. jucundum and L. pseudo-tigrinum, while by some authorities it is regarded as a variety of the Tiger Lily. The theory has been put forward that it may be a hybrid between the Tiger Lily and the pretty Japanese L. Leichtlini, and I am certainly inclined to support this view, as it is in many respects intermediate between these two Lilies. In colour it more nearly resembles L. tigrinum than it does Leichtlin's Lily, and it is especially valuable from the fact that it tends to lengthen the Tiger Lily season, as they are all over or nearly so before L. Maximowiczi commences to bloom. This last differs from L. tigrinum besides its period of blooming in being a far more slender plant, with longer and narrower leaves, while small bulbils are not produced in the axils of the leaves as they are in the different forms of the Tiger Lily. The bulbs of L. Maximowiczi are very like those of L. Leichtlini, while those of another species that they may easily be confounded with are those of the upright-flowered apricot coloured L. Batemannæ. L. Maximowiczi is not seen to any great advantage when grown in pots, and from its tall slender habit of growth it is not fitted for planting in an isolated manner, but a good clump in a nook between some shrubs shows off its distinctive characteristics to advantage, and forms a very showy early autumn feature. This Lily being commoner than L. Leichtlini and the bulbs of the two almost identical, it is frequently sold at the winter sales of bulbs as L. Leichtlini, and it is only after they commence to grow that the difference can be detected. It is also sometimes known as L. Leichtlini rubrum.—H. P.

CARNATIONS FOR WINTER FLOWERING.

THE article on Tree Carnations (pp. 200 and 207) induces me to make a few remarks, which I trust will be of interest to your readers. Carnations, if properly understood, can be had in flower all the year round. I do not of course mean that the same plants can be made to flower all that time, but a succession of them. Beyond doubt the most difficult period to have a good show of bloom is during the months of November and December. In November for the last two years I exhibited a group of choice Carnations in full flower, mixed with Ferns, at the Chrysanthemum shows held at Teignmouth and Plymouth.

Border Carnations should always be layered as early as possible, and it is not always easy for the operator to discriminate between the grass and the flower shoot, so he usually layers them all. A good many of these flower-shoots grow, and in course of time develop buds about this time. These layers, if carefully removed from the parent plant and potted up in good soil, leaf-mould and sand, will with careful handling grow on and flower for months in a house that is warmed just sufficiently to keep out frost, thus adding greatly to the Tree varieties, which by that time may or may not be in bloom.

In America it appears, from what I have read on the subject, the main object of the florist is to have a large show of Carnations for cutting during winter. Their principal shows are in winter, and the treatment of the plants is all directed towards that end. I should like to see an exhibition of this nature in England in December. The photographs that I saw of the blooms exhibited at the meeting of the American Carnation Society, which was held at Boston in February last, were certainly very fine. So impressed was I with the report of this meeting, that I at once put myself into communication with a leading firm of florists in America, and directed them to prepare for me, for winter flowering, and ship to me in the autumn, a considerable quantity of such varieties as were considered the best Carnations in America at the present time. This was done, and the plants were grown on in pots and have just arrived per s.s. *Teutonic.* They have been repotted, and will, I trust, make a grand display under glass this winter in a conservatory that is just sufficiently warmed to keep out frost. Anyhow, such of them as I retain I intend to give a good trial to, as the number of varieties of winter bloomers is not so many but that we can welcome additions which I trust have come to stay. The names and colours are as follows: Lizzie Gilbert, scarlet self; Silver Spray, pure white; Helen Keller, variegated, white and pink; Bouton d'Or, orange-yellow; Daybreak, light pink; Lizzie McGowan, fine clear white; Buttercup, yellow variegated; Uncle John, pure white; William Scott, pink; and Iago, whose colour I do not yet know. H. W. WEGUELIN.

Shaldon, Teignmouth.

BEGONIAS AT LEWISHAM.

TUBEROUS Begonias are largely grown by Mr. H. J. Jones in his nursery at Hither Green, Lewisham, both under glass and in the open air. The season for those grown in pots is now past, but there was still an abundance of bloom in two large houses entirely filled with Begonias when we saw them recently. The outdoor plantations, however, were in fine condition and made a brilliant picture of gay colour. It is needless now to enlarge upon the merits of the tuberous Begonia as an open-air flower for summer gardens, as this is an accepted fact, and the flower is largely grown in many gardens. Although at first decried as of doubtful value by reason of certain natural characteristics of growth and blooming, the persistent efforts of florists have resulted in the elimination of these weak points, and they have given us a strain that does well in the open air. The strain that Mr. Jones is growing in his nursery, and of which we saw nearly 100,000 plants, is an admirable one in every respect, and in habit, profusion, quality and erectness of bloom, leaves nothing to be desired. There are here no named varieties, but the plants are rigidly selected in conformity with the essential points and classed according to colour, which is really all that is necessary so far as concerns Begonias for the flower garden. The plants all have a stout, sturdy habit of growth, and hold their flowers up well above the leaves. We noticed a great improvement in the yellow-flowered forms, which, formerly of a pale hue, can now be had in the richest orange and buttercup-yellow shades. In other self colours, pure white, pink, rose, scarlet and crimson, selections represented the tuberous Begonia in such perfect form, purity and richness of colour, combined with a habit best suited to open-air conditions of growth, that one wonders what further improvements or developments of the flower are possible.

Sowing Cyclamen persicum seed.—Although it may suit the wishes and convenience of market cultivators of Cyclamens to sow the seed in June or August, I do not sow mine until early in November. From this sowing the plants commence to flower in the early part of September and continue until the end of April. It seems to me a great waste of time and convenience to treat this Cyclamen other than as an annual, such satisfactory results being obtainable under this mode of management. Growing the plants in heat too long in the early summer months is not the way to have a satisfactory crop of blossom either from plants raised annually or by retaining the corms from year to year.—E. M.

Cyclamen persicum.—The article with coloured plate of the above in your issue of September 7 reminds me of a well-grown batch of Cycla-

mens which I lately saw at the gardens of Nostell Priory, Wakefield, the Yorkshire seat of the Right Hon. Lord St. Oswald. I understood from Mr. Easter that the seeds were sown at the end of last July, the plants being kept slightly on the move all through the winter. They were eventually potted into 5-inch and 6-inch pots, and when I saw them they were occupying two frames at the back of a north wall, many of the plants measuring a foot across, with fine, bold, handsome foliage marbled and blotched in various ways. Seeds have been sown to supply plants for another year. The plants when finished flowering will be consigned to the rubbish heap. —T. T.

ORCHIDS.

ODONTOGLOSSUM GRANDE.

The contour and general appearance of this well-known Orchid are well depicted in the accompanying illustration, but the spike from which it was taken is not quite large enough to show the real capabilities of the plant. O. grande must be certainly reckoned as the finest autumn-flowering Odontoglossum in existence. It is a strong growing plant with deep green leaves and pseudo-bulbs growing very closely together. The flower-spikes are produced at the time the pseudo-bulbs are finishing their growth, being at first encased in a greenish sheath. The number of flowers produced on each varies from three to eight, the latter number not often being exceeded. Each blossom will measure from 5 inches to 6 inches across the petals, which, as well as the sepals, are of a bright yellow more or less heavily blotched with bright chestnut. The lip is yellowish white in ground colour with a few brown spots and markings, and the whole flower has a glossy shining appearance as though varnished. The flowers last from three weeks to a month in perfect condition, and no harm will accrue to the plants by their being retained provided they are healthy and well established. O. grande, when imported in good condition, is one of the easiest of Orchids to establish, and I have frequently potted it up just as received except that it was carefully cleaned. The safest plan is to lay the plants for a time on a moist stage, placing them in pots as soon as they are plumped up and commencing to root. After they are established, it is a very easy matter to keep the plants healthy, the ordinary routine of cool house Orchids being all that is necessary. The pots should be just large enough to take them easily and good drainage must be given. A thin layer of rough compost consisting of three parts of peat to one of chopped Sphagnum Moss with a good sprinkling of rough pieces of charcoal or crocks is what the plants delight in, and while pressing this firmly enough to keep the pseudo-bulbs from moving, endeavour to have it as light and aërated as possible, the roots being somewhat larger than those of most other kinds. The summer temperature can hardly be kept too low, and the plants must at this season be heavily shaded,



Odontoglossum grande. Engraved for The Garden *from a photograph sent by Mr. J. S. Moore, Wimbledon.*

O. grande being found growing naturally under these conditions. During winter, however, the plants like a little more warmth than is afforded such species as O. crispum and O. triumphans, and if no intermediate house is at command, the plants will be best arranged at the cool end of the Cattleya house. An abundant and constant supply of fresh air is an important detail in growing O. grande, the foliage under this treatment taking on a russetty look that indicates vigorous health, the flowers, too, being of better colour and having more substance than if the plants are grown in a very close house.

O. grande is more constant in its time of growing and blooming than most kinds, and usually rests awhile after flowering. During this period very little water will suffice for it, just enough to keep the bulbs plump, but while growing freely it requires an ample supply. Like all others, O. grande has its insect enemies, and these must of course be kept under by the usual means. I know of no other kind that is so attractive to slugs and small snails, and the closest attention is needed while the spikes are forming. Small pieces of Carrot or Potato laid about near the plants sometimes lures them away, but usually these pests prefer the succulent young spikes and bulbs of the Orchids; so frequent examination with a light in the evening must be resorted to. Although a certain amount of variation exists in the flowers, there are not many named varieties of O. grande, the best possibly being O. g. splendens, O. g. superbum and O. g. magnificum. The first has purple markings in the place of the usual chestnut-brown, the two others being large and richly-coloured forms. The type is a native of dense forests in the neighbourhood of Guatemala, whence it was introduced by Mr. Skinner in 1839. R.

Calanthe Veitchi.—Now is the time to render assistance to the flower-spikes of this popular Orchid. At the base of the strongest growths the flower-spike can now be seen forming. By supplying copious doses of tepid liquid manure made from cow or sheep's manure, to which is added a handful of soot, the spikes will be greatly benefited.—E. M.

Odontoglossum nævium.—This singularly pretty little species is not seen so often as it deserves, for it is one of the most charming and free flowering in the genus. The flowers occur on nearly erect racemes and last a long time in good condition. They are rather starry, as it is termed, that is to say the petals are narrow, but the effect of the crimson and purple spots on the pearly white ground is very attractive. It delights in a cool, moist, and airy temperature all the year round, dense shade during the summer, and a position to catch every ray of sunlight in winter. It must not be overburdened with compost, and it is better to err on the side of small than large pots. Grow it in this way and keep it clear of insects and there need be no fear of the result at flowering time. It was found at a great altitude in New Grenada, so that the reason for cool treatment is at once apparent. The variety majus is larger and more highly coloured than the type, which was introduced in 1842.—H.

Oncidium roseum.—The long branching spikes of this Orchid closely studded with the pretty spotted flowers are very attractive. The plant has no bulbs and bears large leathery leaves only. Being a very free rooter it may with advantage be grown in comparatively large pots. Especial care must be taken with the drainage, covering this with a layer of rough Moss. The compost must consist of about equal parts of peat fibre and Sphagnum, and plenty of charcoal must be intermixed as potting proceeds. The leaves being very heavy, the plants must be supported by a few stakes. Care should be taken in autumn to allow plenty of light and air. This Oncidium thrives well in the Cattleya house.

Odontoglossum tripudians.—The free-flowering nature of this Orchid renders it worthy of a place, though the individual flowers cannot compare with those of some others, such as triumphans for instance. The habit is not unlike that of Pescatorei, which has been suggested as one of its parents. The flower-spike is arching and simple with many flowers, which are bright yellow in ground colour, plentifully blotched and spotted with brown and usually a few crimson spots about the lip. This species is very variable and very easily grown, requiring a cool, moist house and a plentiful supply of fresh air all the year round. It is a native of New Grenada and was introduced in 1869.

Cattleya Schofieldiana.—This pretty and distinct Cattleya is in good condition with Dr. Turner, of Long Melford. In growth it is not unlike C. guttata, but the colour of the flowers is a rich yellow on the sepals and petals, these being plentifully spotted with crimson. The front of the lip is downy and of a rich purplish rose, the lateral lobes very pale rose fading to nearly white. This succeeds in a Cattleya house temperature and requires treatment similar to that recently re

commended for C. guttata. It is a native of Brazil and was named in compliment to Mr. G. W. L. Schofield, who flowered it in August, 1882, a year after its introduction.

Cypripedium selligerum.—This striking and handsome Orchid is one of the older hybrids raised by Messrs. Veitch. The leaves are large, deep green and distinctly mottled. The flower-spikes are erect and bear three or more large flowers. The dorsal sepal is green at the base, becoming white at the apex with deep crimson lines. The petals are drooping, about 3 inches long, dull red with lines of purple and hairy on the edge; the pouch is large and purple. It requires stove heat and abundance of water at the roots while growing.

CATTLEYA LABIATA.

This well-known and handsome species is a striking instance of the fluctuation in value and rarity of Orchids. Not many years since the true C. labiata, or labiata vera, as it has been somewhat peculiarly styled, was possibly as rare as any kind in cultivation, but owing to the thousands of plants sent home since its re-discovery, it is at present cheap enough to be plentifully represented in all collections. Nor is it likely again to become scarce, even if no more plants were received, for it is one of the freest growing and most easily cultivated species known. Not only do the growths individually make good progress, but the number of eyes that break from the newly-imported pieces is remarkable. This being so, it is evident that if necessary the plant may be freely propagated. Several plants imported last season were noticed to be rather small in the bulbs, and the number of leads to each was not enough to make nicely furnished plants, so these were, as soon as they commenced to grow, notched about half way through the rhizome. Some growers may be inclined to the opinion that they should have been left until well established before checking them in this way, and really this would seem to have been a better plan to pursue, but in looking over the plants recently, not one has been found to have suffered in any way, and nearly every eye behind the notches has broken. The leading growths are certainly not so strong as could have been wished; in fact, they are no better than the back-breaks, but as this tends to balance the plants, it is so far satisfactory.

The best time to obtain newly-imported plants of this Cattleya is during the early spring months, they having then the season of growth before them. This is, of course, true of all Orchids to a great extent, but is of especial importance with these autumn-flowering Cattleyas. There is no difficulty in establishing the plants if the usual precautions are taken, the most important point being to gradually inure them to their altered conditions by not allowing too much heat, moisture, or sunlight at first. If fairly strong, many will flower the first season, while others will make good growths, but if the cheapest—because small and weak—plants are selected there will possibly be a few losses. But even with the latter there is always the chance of obtaining something unusual or novel, and this sometimes induces amateurs to purchase odd lots without paying much heed to their condition. The growths being well plumped up by the usual means and a little compost having been given, the plants should be kept rather warmer and encouraged to make a quick and vigorous growth. In the autumn this must be as well ripened as possible before the sun loses its power, and after this rested for the winter months. If all has gone well the plants will need to be repotted during April or May of the next year, as it is a vigorous rooter and must have plenty of space. The roots if entwined much about the small pots in which they were first placed must be carefully broken, and the pieces of crocks with roots attached placed in the new pots. This is an operation that requires a deal more care than potting up a freshly-imported piece, for if the roots are roughly handled or torn from the sides of the pots, a very severe check will be caused. Small pieces are more easily managed than large ones, for where only two or three leads are to be brought into place, no great amount of care in disposition is necessary. Large plants with leads at varying heights are much more difficult. Some stout, yet neat, stakes will be necessary, and with the aid of these and some matting the leads will have to be pulled and tied in as regular a manner as possible, not leaving bare places in the centre of the plant if it can possibly be avoided. A difficulty will sometimes be found in getting the stakes to hold, the loose character of the compost accounting for this. Here a little copper wire may prove useful, first running a piece all round under the rim of the pot or pan and fastening the ends of the shorter wires to this; or if the perforated pans are used, a wire can easily be passed through these holes and made fast. After they are got into as good a shape as possible fill in all around with compost, using plenty of charcoal or crocks with the peat and Sphagnum. Bring this into contact with as many of the leading growths as possible; this will protect the roots from insects and cause a better growth than if these are emitted above the surface of the compost. At the same time avoid burying any eyes that are likely to break, or the ensuing growths will be spoilt, these often tending to make a plant well furnished in the centre.

No special treatment as regards heat and moisture is necessary for C. labiata when established, the ordinary Cattleya house routine suiting it admirably, the plant soon falling into a regular and constant habit of growing and flowering at the proper season. The typical flower is of medium size, with broad, well-formed spreading segments of a bright rose colour. The lip has an intense crimson blotch in front, bordered with rose, and the throat is richly pencilled and very beautiful. Naturally, among so many plants as have recently been imported there is a great variety of colour, and dozens of named forms have been described from time to time. But the great charm of C. labiata is its freedom of flowering at the dullest time of the year, no other Cattleya keeping up such a beautiful display during the present and two following months, where plenty of plants is grown this continuing right on up till Christmas. It is a native of Brazil, having first been brought to this country as far back as 1818, and being the first to flower, was the species upon which this most important and beautiful genus was founded by Dr. Lindley several years afterwards in compliment to the distinguished Orchid grower whose name it bears. H. R.

CYCNOCHES CHLOROCHILON.

The genus to which this plant belongs contains some ten or twelve species, to which the name of Swan Orchids has been given. The singular structure of the flowers has more to do with their popularity than any great beauty they possess. On the whole, C. chlorochilon is the most suitable for general cultivation, and produces a fairly good flowering return for the little trouble needed to grow it well. It is an upright growing plant, with pseudo-bulbs upwards of 1 foot in height and somewhat thin foliage. The flowers occur on arching racemes, some varieties bearing from eight to ten rather small blooms, while in others the blossoms are larger, but fewer on the spikes. The sepals and petals are creamy white, the lip pure white, with a blotch of green in the centre. The column is about 2 inches in length, curved gracefully, and the pollen at the end makes a swollen rounded head. The plants commence to grow early in the new year, and this is the season for repotting. They like a strong compost, being rather gross feeders. Two parts of loam, one of peat fibre and one of Sphagnum Moss will grow them well if used in a rough condition over efficient drainage. Very little water will be needed at first, light dewings from the syringe being all that are necessary. The plants must have a light position in a warm, moist house and be shaded from bright sunshine. As soon as the young growths are starting the syringing must be discontinued, but a little more water will be required by the roots, which will by this time have become active. Nor must the plants be watered overhead at all after this, as the young growths collect it to their own detriment. By midsummer the flower-scapes will be showing and the growths approaching completion. Frequent spongings are necessary to rid the plants of the soft brown scale so frequently found upon this class of Orchids, using the sponge very carefully to avoid bruising or puncturing the leaves. After the flowers are past and the bulbs are quite matured the foliage turns yellow and drops off. The water supply must then be diminished, very little being needed while at rest. The winter temperature must not fall below 50°, or the pseudo-bulbs are liable to be attacked by spot, especially if the atmosphere is at all damp. C. chlorochilon is a native of Demerara, and was introduced in 1838.

Trees and Shrubs.

MANDEVILLA SUAVEOLENS.

I have seldom had a more pleasant surprise than what came to me this morning when I perceived Mandevilla suaveolens once again looking in at my bedroom window, and not only so, but just about to break into glorious blossoming. Of course, this latter is only a slender reminder of what used to be, but any reminder at all under existing circumstances is of the greatest value to me. I should think that this magnificent climber has been where it is now in my garden for the last twenty years or more. It has braved several hard winters and stood many a storm, but I feared all through the beginning of this year and nearly up to midsummer that its course at last was run, and so also it seemed to be the case with three other specimens which I planted at a later date against the south side of St. John's Church. All four were cut down to the ground by the ruthless frost of last January and February—the main stem of my shrub had become so large that it had a girth of 2 inches or 3 inches, and the others were going on in the same way—but a bundle of dry sticks was all that seemed left to me of some of the greatest ornaments I possessed. Judge, therefore, of my surprise when a short time ago green shoots appeared from the bottom in three out of four cases. One, I fear, has gone hopelessly wrong, but the other three specimens of Mandevilla have reasserted themselves in a wonderful way, and they have done their duty well. The one I have in this garden has nearly managed to touch the eaves of my house, and what is more unlooked for than anything else, there will be just an umbel or two of its splendid white blossom, a reminder of the days that are over—a very strong presage indeed of returning victory and success in the days that are to

come. I am sure that if anyone had told me somewhere about midsummer that on the fourth or fifth day of September I should again have any measure of blossom from this glorious climber I should have expressed myself as incredulous about it to the last degree. There was no sign or apparent likelihood of any such thing, but when once the plant began to grow, it did so with the utmost vigour. It seemed almost to know that it had very hard work cut out for it this year, that it must not lose a minute of sunshine if it was to touch my bedroom window again, and when it had done so it signified its accomplishment of a very difficult feat by breaking out into smiles of the most captivating blossom that can be conceived. The lesson which may be learnt from it all is quite plain. This denizen of Chili, which has been so often consigned to the greenhouse and sometimes even to miseries of a worse description than that, which hates to be confined and very soon becomes the prey of red spider and other abominations of the same sort, will live and do well in the open border in such places as the Isle of Wight, and it will make one glad that trust was put in it to combat any adversity which might occur.

I believe that the shrub against St. John's Church, which at present shows no signs of life, was killed, not so much by the frost as by an encroaching Cotoneaster, which got too close to it and robbed it of the sunshine which it loves so well.

But let anyone think what the Isle of Wight and other places would be if Mandevilla suaveolens were as commonly grown as Myrtles and Passion Flowers are. As it is, nobody thinks of it, or if it is thought of, it is taken for granted that it is an altogether absurd speculation to go upon, and splendid possibilities are neglected in this and in similar parts of the world. I am quite certain that if anyone who is fond of flowers had seen the performance of my Mandevilla three or four years ago he would never have been contented to be without it for a day. I am presuming of course that he lives in some southern spot, for here it is perfectly at home, and though once in about forty years it must be admitted that it may be cut down to the ground, all that will happen is that it will get strength from adversity, and very soon it will be struggling upwards again in renewed health and vigour. My confidence in my favourite is immeasurably increased by recent, or rather present, experience. It did so happen that a few years ago—on the occasion of one of the last visits he paid to me—my old friend Canon Prothero saw this magnificent climber quite at its best. The southern side of my house was glistening with the profusion of semi-tropical blossom as white as the driven snow. One could have plucked bunches of Mandevilla from the wall and not have missed them in the least, and it need scarcely be said that his surprise was only equalled by his pleasure. He had too many other things to do to take much trouble about flowers, but he was certainly fond of them, and he liked to get hold of any good thing that came in his way. I have several times taken plants to his garden at Whippingham, which were then consigned to situations where they were certain to perish. But in the case of Mandevilla greater caution was taken. He let me have my own way, and we selected the very best spots we could find on the south side of Whippingham Church, good soil was provided for them, and we spent some little time a few years ago in planting two specimens of Mandevilla suaveolens, and giving to them just what they required. On the sorrowful occasion of my dear old friend's funeral in October last we had to pass close to these beautiful things, which were so remindful of him and of the happy morning I passed in his company, and I was extremely glad to see that they were quite an exception to the general rule. Nothing could be doing better than they were doing at that time, and I hope that for many years to come they will continue to prosper. I have not seen Canon Prothero's successor of late, or I should have asked him at once how Mandevilla suaveolens got through last winter. But however it may have been in Whippingham Churchyard, and I hope and trust that it was all quite right there, I am sure that the climber which has managed to do so well in about seven or eight weeks, that it now looks in at my bedroom window again, is worthy of all admiration, and as it has got through the terrible ordeal of 1894–95, I have now the assurance that I shall never be without it as long as I live.

Henry Ewbank.

Spiræa Anthony Waterer.—Since writing the note on page 138 concerning this Spiræa the colouring of the flowers has become as rich as last year, hence the fear expressed that it might be developing a tendency to revert to the normal type has proved to be unfounded, which I am indeed pleased to acknowledge, as it is such a beautiful dwarf flowering shrub that it would be a great pity if there was any liability to produce paler blossoms. The great heat and drought would appear to be answerable for the want of colour in the flowers, as after the copious rains experienced in the early part of August the blossoms at once improved in colour.—T.

Orchard and Fruit Garden.

BACK GARDEN APPLES.

My back garden is of the usual long strip description common to nearly all moderate-sized town houses, being about 120 feet long by 25 feet wide. The walls are covered on both sides with the best Gooseberries, which bear well and ripen in succession, those on the shady side lasting until August, while those in full sunshine ripen in June. There is a robust Victoria Plum tree three years planted, and also a healthy young Hazel Pear, but my main fruit crop consists of Apples, the trees of which have been planted twelve years and have cropped well for the past ten years.

The kinds are mentioned in their order of ripening: Juneating or Jeunetting, a small conical, yellow fruit, heavily streaked with red and heavily perfumed, makes a pretty dish and ripens early in July. This is followed by the Irish Peach Apple, a handsome fruit with a delicious aroma ripening in August, this being succeeded by the brilliant Worcester Pearmain, a very showy Apple of fair flavour.

The cooking kinds are Keswick Codlin, a free bearing and fertile cropper, and one of the very best of all early Apples for cooking. Every cottager with a bit of garden ought to have a couple of bush or dwarf trees of this kind. Lane's Prince Albert, Early Strawberry, Duchess of Oldenburg, Lord Suffield, Barnack Beauty, Schoolmaster, Warner's King and Wellington or Dumelow's Seedling, and the old Striped Beaufin are all worth a place, the two last-named being kinds that keep well into the new year.

An Early Prolific Plum (Rivers) and a Fertility Pear (Rivers) might be added to the most select collection, and if there is wall space a Green Gage and a Pond's Seedling Plum, or if the soil be gravelly or flinty a Moorpark or Breda Apricot might be tried with advantage. Even in the midland counties, as in Leicestershire, Rutland, and Northampton, I have seen very fertile and profitable crops of Apricots grown on cottage and farmhouse walls, with their roots beneath a hard pebble pavement, but I notice that a gravelly soil seems to suit them best.

But Gooseberries and Apples are after all the best and most serviceable of all fruit trees for small gardens, or even for many large ones as well. At West Ham the other day I saw over a thousand fine healthy and fertile bush or dwarf Apples and Pears interspersed with standard Pears and Plums, and the crops were splendid as seen on the trees, or as packed in bushels, half bushels, and sieves ready for the market. These trees varied from three to eight years old, and had been thinned a little, but not snipped and pruned in the usual fatal manner.

Good healthy bush Apples on English Paradise stocks once well planted in deep rich soil, and then left untouched, soon repay the cost of planting, and where soil and climate are alike genial they very often form the most profitable of crops, even though they may not yield enough to buy the freehold of the land on which they grow. F. W. B.

Plum Jefferson.—I do not think this Plum is grown nearly so much as it deserves, as either for dessert or for cooking I do not think it has a rival. No Plum that I know makes such lovely jam as this, being preferable to that from Green Gage. As a cropper it cannot be excelled, not even by Victoria. Well-managed trees growing against an east wall never fail to give a full crop of handsome fruit without the trouble of thinning.—E. M.

Kirke's Plum.—This Plum has been very fine this season, the fruit being both plentiful and of large size, the flavour also being superb. I think, however, that Kirke's must be essentially classed as a wall Plum, as in the open it is a shy bearer. I met with it once in Surrey bearing freely in the open, but this is more the exception than the rule. The soil was gravelly and the tree a small standard. In this garden it is growing both against an east and a north wall, in each of which positions it bears freely, ripens up perfectly and carries a fine bloom. It is remarkable that a Plum will bear freely against a north wall, whilst in the open it is so shy.—A. Young.

Colour in Peaches.—Rarely have Peaches against open walls been of better colour than this season—in fact, it is quite dense on several of the varieties, Royal George, Stirling Castle, Crimson Galande and Diamond being perfect. There are few fruits, if any, which repay the grower for the little extra labour bestowed upon them in the process of exposing than Peaches. Their marketable value is increased considerably and the flavour is improved. For market, many people gather the fruits too early. It is astonishing the benefit which follows leaving the fruits an extra two or three days upon the trees. If carefully handled and not left too long, of course, the fruits will carry well if well packed. I have seen fruits which were required for market literally torn from the trees. Peaches which are gathered thus will never ripen up of good flavour. I look over the trees every morning after the fruits commence to ripen. The fruits if left till far on in the day or until they have become heated are liable to show the least pressure.—A. Young.

Peach Dymond.—This Peach is working its way surely to the front as one of the most reliable varieties in cultivation either for outside or indoors. Three or four years ago I called attention to its high merits, and subsequent experience has justified what I then stated. The fruits all swell

off evenly to a large size if the tree is not too heavily cropped. For outdoor culture against a south wall there could hardly be a better variety not only for home consumption, but for market as well, as good fruits fetch a good price.—A. YOUNG.

Apple Duchess of Oldenburg.—As recently referred to by Mr. J. C. Clarke, Duchess of Oldenburg is really a handsome and beautiful Apple; in fact, I doubt whether there is a handsomer Apple. In its outward appearance it bears some resemblance to well-grown specimens of that handsome American Apple, Washington. It is undoubtedly one of the best early Apples in cultivation. I have it in excellent condition this first week of September. It is best gathered and used or marketed direct from the tree and must be carefully handled. It is not altogether a soft Apple, but on account of its very clear skin it is apt to show bruises quickly if at all roughly handled. This Apple will succeed under any form of culture—either standard or bush—or even as a cordon along the margins of walks. From cordons I have had really very handsome fruit. Its brisk, spicy and refreshing flavour is most marked.—A. YOUNG.

Peach Noblesse.—This Peach is excellent this season on the open wall. It is really a fine season Peach, as in wet and dull seasons the growth is subject to mildew; it will not stand overcropping. Alexandra Noblesse, although a most excellent substitute, is not quite equal to the old variety in point of flavour, but the tree has a far better constitution. I have two very fine trees, on which I have never seen a speck of mildew or any aphis. Whatever some correspondents may say as to its being a shy bearer, it is not so in this garden, as always far more fruit sets than is required to remain for a crop.—A. YOUNG.

RASPBERRIES.

MUCH useful information has been given by several correspondents in THE GARDEN of late, and I am only induced to continue the subject by the impressions made on seeing the fine bed of Baumforth's Seedling at Hartham Park, Corsham, Sir John Dickson's Wiltshire residence. Under ordinary cultivation this variety is of dwarf growth—in fact, this is looked upon as a very great recommendation in its flavour—but under the special treatment of Mr. Welch, gardener at Hartham, it grows as rampantly as any of the many taller growing sorts. The garden here rests on a deep bed of stiff clay, so bad that other fruit trees can only be kept in good bearing order by somewhat frequent manipulation at the roots to prevent them penetrating into the clay, the surface being treated in such a manner as to tempt them to make fibrous, instead of strong tap roots. About one half of the large bed of Raspberries under notice was planted in 1892, the ground having been occupied by Black Currants. This was trenched 15 inches deep, plenty of manure and leaf-mould being worked in to that depth, the subsoil below it left untouched. In the spring they have a thick mulching of strawy manure, which prevents summer drought penetrating to the soil below, and in a decayed state furnishes the requisite food for the roots on and near the surface. That the treatment suits the canes and crop there is ample evidence in their vigorous state and the large gatherings obtained, even in such an unfavourable season as the present one has been. A shortening of the bearing canes has been practised in the usual manner, but a few in opposite pairs were left this season to ascertain what might be expected of unpruned canes, and when I saw them in the height of the bearing season the weight of fruit on these pairs of canes was extraordinary, so much so that they could not be lifted without risk of breaking them. Temporary supports had to be erected to allow of the pickers passing beneath them. It is Mr. Welch's intention this season to leave two rows unpruned and erect an arched trellis to carry them, and the crop, estimated on the last season's trial of the principle, must result in a very largely augmented one. This bears out what has been advocated recently in these columns, that the upper portions of the canes, which are commonly pruned away, are the best for giving heavy and superior crops, and certainly the question is one deserving of more general acceptance and adoption. Of the quality of Baumforth's there can be but one opinion—it stands unrivalled in its sweetness. Superlative is an undoubtedly fine variety, the berries assuming unusual proportions, the canes being vigorous and free fruiting, and with me continuing in bearing till late in the season. It is a variety that should be planted generally where fine fruits are appreciated. As a dessert fruit, however, Baumforth's grown as at Hartham is better, because it combines fine flavour with size of berry. W. STRUGNELL.

Stocks for Pears.—The non-success attending the culture of certain Pears is often erroneously attributed to the unsuitableness of the soil or locality, when the real cause lies in the stock on which the tree is worked. I have had strong proof of this lately in several gardens noted for fine Pears. Trees of certain Pears were bought in which matched each other exactly in rooting and general good appearance, yet, planted under the same conditions and receiving exactly the same treatment, some have done in every way satisfactorily, while others have signally failed, not perhaps to grow, but to fruit, clearly proving that the stock was at fault. I think more pains should be taken by nurserymen to find out the best stocks for the various sorts and then to graft on no other, as it is a serious matter for gardeners after watching and waiting to be thus disappointed, and that, too, through no cultural error.—J. C.

Raising young Vines.—Some people still appear to have a hankering for the strongest Vines procurable when planting new vineries or refurnishing old ones, but because they are strong and vigorous looking it by no means follows that they are either well rooted or ripened. One good Grape grower in East Anglia raises his Vines for planting from eyes put into heat not too early in the year, and grows them on without any bottom-heat, their final shift being into 6-inch pots. These in autumn are sometimes no thicker than a good-sized writing quill, but the wood is hard and well browned, the eyes prominent even at the base of the cane, and the roots healthy, hard, and wiry. These, when cut back and planted in firm borders, invariably go away freely, a colony of new fibres being formed by the time the stored-up sap is exhausted. Pot Vines grown in strong bottom-heat have nothing to recommend them beyond their size, which after all is but a secondary consideration. Nurserymen, however, have now for the most part abandoned the bottom-heat system, finding that gardeners generally are opposed to planting Vines so raised.—J. C.

Market Grapes.—I recently visited one of the Grape-growing establishments of the Messrs. Rochford at Ponder's End, Middlesex, and was quite astonished at both the weight and quality of the crops. The Vines are grown in long span-roofed houses of great width, but on account of five or six rows of Tomatoes in pots occupying the centres, not more than 8 feet or 9 feet of roof is allowed the Vines. Nevertheless in some instances they were carrying from fifteen to twenty bunches, some of which would grace any exhibition table. In some cases three and even four canes were taken from each Vine, this, perhaps, making up, so far as the formation of roots was concerned, for the shortness of the individual rods. I can scarcely believe that such Vines can last long under such a strain, but the aim of the Messrs. Rochford and all similar growers doubtless is to obtain the greatest possible yield of fruit in a minimum of time, and then to root out and plant fresh Vines. Liberal feeding is the rule, and at the time of my visit, the Grapes being far advanced in colouring, artificial manure was being conveyed in wheelbarrows, spread somewhat thickly over the surface, and watered home with the hose. I have often thought it would do young men in training for private places good to spend a twelvemonth in one of these market establishments.—J. C.

GARDEN FLORA.

PLATE 1032.

DENDROBIUMS.

(WITH A COLOURED PLATE OF D. DALHOUSIANUM AND D. DONNESIÆ.*)

THERE is no disputing the popularity of this fine and extensive genus of Orchids, one of the most generally useful in the whole family. The blossoms are in nearly every case very attractive, and the flowering return is ample, considering the amount of space the plants take up. The beautiful combinations of colour in some species and the rich self-yellow of others are included in as wide a range of colour and form as can be found in any one genus of plants, while the adaptability to culture of the majority is remarkable. Naturally, in so large and variable a genus different modes of culture are required. There are first the long cylindrical-stemmed, usually deciduous kinds as represented by D. Pierardi or D. Wardianum. These are best grown in baskets or small pans suspended from the roof, while the evergreen section, as D. densiflorum or D. chrysotoxum, are best reared in pots of varying sizes, according to the habit and vigour of the species. Again, the very dwarf-growing kinds, as D. pulchellum or D. aggregatum, thrive in many places on blocks more or less heavily dressed with Moss. The majority of Dendrobes like a strong, moist summer heat with plenty of sunlight, especially towards the end of the season, to ripen the growth and lay the foundation of a bounteous crop of flowers. The winter temperature need not be high, in fact 50° is ample for most of them, the principal exceptions being those that grow naturally through the winter months, including several of the nigro-hirsute group and also the deciduous D. chrysanthum and others. Propagation of many of the species may be effected by cutting the stems into lengths of 6 inches or 8 inches and laying these upon pans or boxes of Sphagnum Moss, this mode being frequently resorted to where the pruning system is practised. This consists in cutting away the pseudo-bulbs after growing, placing the plants in strong heat afterwards to induce a rapid growth, ripening this in due course and again cutting them off after flowering. It is not necessary here to go into the merits or demerits of this system, but it is one that cannot be recommended to beginners in Orchid culture, or indeed to anyone who is not prepared to give the plants the best of treatment afterwards. Many kinds, again, produce young plants upon or near the end of the stems, and advantage may be taken of these to increase the stock, while others can only be propagated in the usual way by dividing up the plants or taking off back breaks.

Many choice and beautiful hybrids have been obtained by crossing different species, and while some of these are fortunately plentiful, others are extremely rare and valuable. The good old D. nobile and D. aureum are the parents of several of these, including

D. AINSWORTHI, a striking and beautiful Orchid raised in the garden of the late Dr. Ains-

* Drawn for THE GARDEN by H. G. Moon in Messrs. Sander's nursery at St. Albans. Lithographed and printed by Guillaume Severeyns.



worth, of Manchester. It closely resembles D. nobile in growth and partakes of its free-blooming character. The sepals and petals are white, the lip also white with a rich purple blotch in the throat. The variety roseum is similar to the type, but the whole flower is suffused with bright rose, the lip also deeper in colour. These are said to have both come in the same batch of seedlings in 1874.

D. chlorostele was raised by Sir Trevor Lawrence in 1887 from D. Linawianum and D. Wardianum, and is described as having the sepals white, edged with purple; the petals white, with a purple blotch at the tips; the lip amaranth in the centre, with a light yellow border and purple tip.

D. Leechianum was raised in the garden of Mr. W. Leech by Mr. Swan in 1882. This has the same parentage as D. Ainsworthi and is somewhat similar, but has larger and deeper coloured flowers. The sepals are white, tipped with rich purple, the petals wavy and similar in colour. The lip has a blotch of deep crimson in the throat, and is also tipped with purple. The upper flower in the accompanying plate is



Dendrobium Dalhousianum, to show habit of growth.

D. Donnesiæ, a beautiful member of the nigro-hirsute group exhibited before the Orchid committee of the Royal Horticultural Society by Mr. Bradshaw, The Grange, Southgate, in March of this year, when it was deservedly awarded a first-class certificate. As will be seen, the segments are well thrown back as in D. infundibulum, while the blotch on the lip is similar to that of a variety of this Orchid (D. i. Jamesianum). It is said to be as strong in growth as D. formosum, and is a most desirable acquisition to this none too numerous class.

D. Dalhousianum, the other species figured, is an Orchid requiring plenty of room for its full development, as the pseudo-bulbs not unfrequently attain a height of 6 feet or 7 feet. It was introduced from India in 1837, and named in compliment to the late Countess Dalhousie by Dr. Wallich. This plant requires a long season of growth in a moist tropical house and a short dry rest in a cooler temperature afterwards. Given these conditions it is as easily grown as D. nobile, and when once the plants are large enough they will bloom regularly and well every season, large plants with a dozen or more racemes being truly magnificent objects during the months of April and May, its usual flowering season. H. R.

Princess Alice Stock.—This Stock is probably the forerunner of a new race of a useful family of summer flowers. It comes into bloom in the same space of time as the ordinary Ten-week, but flowers continuously through the summer. It would appear to be intermediate between the Ten-week and the East Lothian. It is a most useful variety to grow for cutting and equally valuable for creating a display in the garden during the summer and early autumn months.—J. C. B.

The Week's Work.

KITCHEN GARDEN.

Handlight Cauliflowers.—The sooner preparation for planting these is made the better, although the work will not in the majority of cases be carried out until the first or second week in October. If the plot selected for this early lot was thrown up roughly, as advised a month ago, it will now be in a sweet and wholesome condition, the soot and other insect-banishing ingredients then mixed having by this time become thoroughly incorporated with the soil. In the first place, tread firmly twice over, afterwards raking off all rough stones. Mark out the distances, allowing between each row of handlights a pathway of $2\frac{1}{2}$ feet. Fix the line and throw out a slight cavity only just below the ground level and exactly the width of the handlights, afterwards placing these in order at a distance of 3 feet from one another. Leave the tops off unless very wet weather should set in, when it will be advisable to put them on crossways to prevent the ground becoming too saturated before planting time arrives.

Preparing for frame plants.—A good deal of the success, or otherwise, attending frame-protected plants of Cauliflowers, Cabbages and Lettuces depends on the way in which the beds are prepared for their reception in October. When these subjects are planted into light soil of considerable depth, lifting is invariably attended with much ball-breaking, the most useful fibres are destroyed, and a great proportion of the plants either runs away to seed or hearts in prematurely. The best way is to place a shallow frame on quite a hard bottom of ashes, afterwards covering this with a good thick layer of rotten manure, and finally laying on from 6 inches to 8 inches of good-holding loamy soil, firming it well when in a semi-dry condition. From such quarters the plants, if not too thickly planted, will lift with capital balls, a portion of the underlying manure still clinging to them, which will further nourish them when put into their permanent quarters. The frames being made ready, the lights should be left off day and night to get the soil thoroughly moistened and sweetened. When plants are pricked out into beds made up only a few hours previously, they always flag and suffer far more than when the root-run is firm and settled by standing a week or two.

Early Pea borders.—It may sound somewhat strange to talk of this yet, but as in all gardens of any magnitude work becomes more pressing as soon as frost sets in, it is well to take advantage of a slack period to get in readiness any early borders, at least where Peas are sown in November. Where these borders have not a good natural fall towards the pathway, success in early Pea growing will be rendered more certain by adding friable soil in such quantities as will not only produce that, but secure also perfect drainage. Burnt refuse, potting-shed refuse, and the sweepings of walks and drives are all suitable for the purpose.

Planting winter Cucumbers.—If the directions given in former calendars have been attended to, plants of suitable winter varieties will now be fit for planting out. With a cleansed and disinfected house no fear need be apprehended of attacks by red spider, at any rate before the plants get well established. Presuming the house is furnished with sufficient bottom-heat pipes, all that will be needed is to three parts fill the bed or pit with good sound leaves, firm them well, surmounting this with mounds composed of good porous loam, rather light than otherwise, a free admixture of fresh horse droppings and rather large pieces of mortar rubble, the latter being necessary for securing a free escape of superfluous water from the roots. Do not build up the mounds too large to start with, as they can easily be added to as the plants extend in growth and emit new fibrous roots. Place a neat stick to each plant and water home, keeping the house rather close for a time and syringing the foliage twice daily in sunny weather, giving the afternoon bath at 2 p.m. and sprinkling walls and pathways. Where evaporating pans exist they may well be filled with diluted liquid manure, the ammonia arising therefrom proving highly beneficial to growth, and acting as a check to red spider, the great enemy of winter Cucumbers. The laterals which are formed between the bed and the first wire of the trellis must all be pinched back to a couple of leaves.

January fruiting plants.—Seed may now be sown where convenience exists for growing a secondary batch for coming into bearing during January and February. As before stated, Syon House or Telegraph cannot be beaten for the purpose, and as soon as the seeds germinate raise the pots well up to the light and in a position free from draught. Be careful in watering, as the base of the stems is very prone to canker at this advanced date.

Tomatoes for winter.—Where these have been growing for some time in pits or frames removal to comfortable quarters must now take place. This is necessary not only to hasten on the crop, but to avoid an attack of mildew, which is apt to come upon young plants growing in cool quarters as the nights get colder. If the 6-inch pots are well filled with roots, a shift must be given into the fruiting pots, the best size being

10 inches in diameter. Be careful to drain well and to add plenty of opening material to the soil, pot firmly, and give the plants a position close to the glass. Supply atmospheric moisture by means of sprinkled floors and walls rather than by overhead syringings, and as soon as the roots take hold of the new compost air liberally, though carefully, avoiding front air after the middle of October, as this is apt to produce mildew. Use clear water only until the leading growths have reached the top of the trellis, and indeed until a full crop of fruit has set, except in the case of weakly plants, which may have a little assistance two or three times a week. Pinch out all side growths and train on the one-rod system.

LIFTING POTATOES.—All Potatoes except the latest crops in fields had better be lifted at once, or autumn rains will not only be liable to cause a secondary growth, but also disease. Store in dry, airy sheds, not too thickly, sorting them over in wet weather. J. CRAWFORD.

FRUIT HOUSES.

EARLY PEACHES.—The season is at hand when the grower can make selections for planting and attend to the wants of growing trees either by lifting to prevent gross growth or thinning out useless wood. The trees often suffer from want of moisture at this season and should get copious supplies. With the roots cool and moist there will be less red spider, and by retaining healthy foliage to the last the buds swell more freely. There should be no lack of moisture overhead during bright weather, and should red spider have obtained a hold, use sulphur freely two or three times a week when damping overhead. Now is a good time to do any stopping or thinning of wood on crowded trees, and if there is room for free extension, lay in freely the lateral growths from the leading branches. By this means a large space is quickly covered, and there is less gross growth than when severe cutting back is practised. Trees two or three years old may be made to cover a large space and bear heavy crops.

LIFTING PEACH AND NECTARINE TREES. — I briefly touched upon the importance of this some few weeks ago, and pointed out its value if done at this date. As the best time to lift is the end of September and early in October, there should be no delay in doing the work. Lifting is not only advised for strong or too vigorous trees, but also to prevent gumming, canker, and loss of branches. I am sure many trees are ruined by being starved, and disease follows loss of surface roots. By lifting now there need be no loss of crop the following year if the work is done while the trees are in full leaf. It sometimes happens the trees are much crowded, and may require to be planted in other positions. By removing now the trees will have had time to recover from the check and make new roots before the season of rest. With large trees more care is required to preserve as many of the fibrous roots as possible. It is well before interfering with the tree to be lifted to prepare the fresh site so as not to expose the roots a moment longer than is necessary. In all cases it is well to prepare a large hole for the tree so as to work round the roots, thoroughly packing the soil under the roots and making firm as the planting proceeds. Do not plant too deeply, as with the usual surface-dressings and feeding the border will be raised. Deep planting is often the cause of barren trees and canker. Trees of any size are best prepared the previous year if they have occupied the same position for some time. By so doing the roots will be in better condition and the trees will not drop their fruit the season after lifting. Every means should be employed to secure a large ball with ample roots.

PLANTING AND SOILS.—I attach much importance to the planting, no matter whether it be of home-grown trees or those sent from a distance. Though the Peach and Nectarine will do fairly well in diverse soils, there is a much better return by adding to the soil such materials as old mortar rubble, good turfy loam whenever it can be obtained, wood ashes and burnt refuse of any kind, giving poor soils a liberal addition of bone-meal or small crushed bones in preference to a mass of animal manures. Drainage in some positions is equally important, and in cold late districts a free use of brick ends or rough rubble under each tree or growing on raised borders will give much better results. I have found these trees lifted and replanted in such a position not need further attention, except in the way of surface dressings, for many years. Should the borders get too high, now is a good time to take away the top soil quite close to the roots, and then give a covering of rich soil over the surface roots. I find excellent results are obtained when the roots have a hard-trodden path over them. In planting, the soil should be made as firm as possible, and young trees should not be planted deeper than when grown in their original quarters or when received from the nursery. After planting, do not attempt to train, merely support the tops, as there will be a certain shrinkage of the soil. In bright weather it will be necessary to syringe overhead daily to retain old foliage and prevent the new bark shrivelling. With large trees it is an easy matter to shade during bright sunshine early in the day. Keep the house closer for a short time to prevent cold draughts. By closing the front ventilators the house will be kept moist and new root growth will soon be active.

SELECTION OF NEW TREES.—It is well to choose those trees with sturdy growth in preference to those with a gross shoot or two and the other portion of the trees unevenly balanced. Trees free of blemish in the way of gumming, and with what are termed the extension branches fairly developed, are the best. For very early use, Waterloo, Amsden June, and Hale's Early are good. To follow these, Early Grosse Mignonne, Dagmar, Royal George, Noblesse, Bellegarde, Dymond, and for late use, Barrington, Princess of Wales, and Walburton will be found useful. The best Nectarines are Rivers' Early Orange, Early Rivers, Lord Napier (excellent for all purposes), Pineapple, Hardwicke Seedling, and Humboldt. There are many others, but the half dozen named may be relied upon for cropping and quality.

POT TREES.—Of late years more attention has been paid to trees in pots, and even if it is not intended to grow these largely, a few may be made profitable when new houses are planted with permanent trees, as the pot trees will give a good return for two or three seasons till the house is well filled. If it is intended to get a full crop, trees that have been grown a season in pots should be obtained. These will be well set with fruit buds and ready for forcing, but for growing on, select the trees and pot just as the leaves are falling, plunging the pots in the soil to the rims for a time. If it is intended to grow a house of pot trees, a start should be made in the early autumn, as the trees potted now will fruit much better than when left till the early part of the new year. The trees for this work need more cutting out of weak spray and useless wood. By doing this work now, light and air are admitted, facilitating ripening of the wood. The trees if very robust can be shortened in when a firm growth is made. By growing pot trees there is a great gain in the way of variety. As a catch crop, I am a great advocate of pot trees, as if there is a demand for these fruits there is a good return in a short time. G. WYTHES.

A Begonia garden.—The beds on the two Grass plots near the Fern houses at Kew are a little garden in themselves, and a very gay one too in their present state, though they only contain Begonias. In most of the beds the small-flowered Begonias of the semperflorens race have been used, and with an excellent result. B. semperflorens rosea fills four corner beds, and the profusion of its rosy pink flowers is charming in contrast with the deep green leaves. The oblong intervening beds are filled with the large-flowered tuberous-rooted kinds. On the opposite plot are two round beds of the ordinary form of B. semperflorens and a fine bed of the variety named Crimson Gem, a showy, handsome form, having bronzy green leaves and deep crimson flowers, its effect of leafage and flower together very telling. All these beds are very regular and well filled and make a pretty feature, quite different from anything in other parts of the garden, but they lack the finishing touch of a few fine-leaved plants to break up the apparent flatness.

CHRYSANTHEMUMS.

NEW CONTINENTAL CHRYSANTHEMUMS OF 1895.

To those who have watched the raisers of new Chrysanthemums in France, it must have appeared of late as if the unusual success of one or two eminent growers has acted as an incentive to a large number of lesser lights to do their utmost to introduce new seedlings into this country by way of competition.

All the new lists for 1895 are now to hand, and they form a little pile of some considerable dimensions compared with those of previous years. The numbers of supposed new varieties, which of late years have been on the increase, from established sources do not show any signs of diminution, for while we had only a few years ago seven or eight regular growers of seedlings, the total for the present season is probably nearer a score. Some of them are unknown to our importers, and their flowers have consequently no reputation in England. It seems, therefore, that out of nearly four hundred new French Chrysanthemums only a limited proportion is likely to find their way into the hands of our collectors, and so the list which is appended to this paper will merely contain such varieties as there is reasonable hope to believe will be seen in part at the trade exhibits during the autumn of the present year.

With respect to classification, a great hindrance to a free importation exists in the neglect of some of the French nurserymen to adopt our method of classification. An omission to state to what section a new flower belongs brings an element of uncertainty into the choice of what novelties shall be purchased, with the frequent result that it is passed over for one where the information is definitely given, and which may perhaps be an inferior flower. Those growers, however, who know what it is to do business with English introducers are more careful in this respect, and consequently reap the benefit of their knowledge. It is not difficult to gauge the way in which popular taste still runs. By far the greater proportion of the 1895 novelties appear to belong to the Japanese and the incurved sections. There are scarcely any new Anemone or pompon varieties enumerated in the foreign lists, and the hairy-petalled varieties this season are less numerous than we might expect. These, however, as on previous occasions, will form the subject of a separate article.

All the well-known growers, such as Messrs. Délaux, De Reydellet, Lacroix, Calvat, Boucharlat and Crozy, appear to the fore, but there are others, such as Messrs. Chantrier, Ricard, Rivoire and Héraud, who will doubtless become better known as time goes on.

Last autumn the Chrysanthemum shows in France were probably unusually numerous, and many of the new seedlings were awarded prizes there which it would serve no useful purpose to record here because of the different standard set up by English growers. M. Calvat is the only raiser who regularly sends his seedlings to be adjudicated upon by the floral committee of the National Chrysanthemum Society, and last season he was exceptionally fortunate.

The question of nomenclature is one that always gives rise to much dissatisfaction, for there still appears to be an utter disregard of anything like organised method to prevent synonyms. Many of the names that appear in the following list will be recognised as having been used before, and nothing we can do seems likely to arrest it. When the French inaugurate a Chrysanthemum society

on the lines of our National Chrysanthemum Society or the American Chrysanthemum Society, there may be some hope, but until then there appears to be no chance of anything but additional confusion year after year. It is interesting to record that efforts are now being made to procure seed from Japan as well as to import all the best of the English and American seedlings. By this means the Continental stock will no doubt be improved, as the addition of fresh blood cannot fail to have a beneficial effect in the process of cross-fertilisation which is so largely practised by the French growers in their favoured climate :—

Album Striatum (Lacroix). — Japanese ; white, striped violet-carmine.

Amiral Avellan (Calvat).—Japanese reflexed; bright dark yellow, broad petals. First-class certificate N.C.S.

Annamite (Boucharlat).—Broad petals, chrome-yellow, striped and speckled red.

Apollon (Boucharlat).— Incurved ; broad petals, coppery red, reverse old gold.

Babinet (Lacroix). — Broad petals, brick-red, reverse old gold.

Baronne de Gunsbourg (Reydellet).—Japanese ; long petals, mauve, passing to white, tinted straw in the centre.

Baronne de Villefranche (Bruant).—Carmine-rose, marbled white, tips white.

Bayard (Calvat).—Japanese ; rosy white, reverse white, tinted green at tips.

Belle Mauve (Crozy).—Broad pointed petals, pure mauve.

Bicoto (Bruant).—Golden rose, reverse shaded white.

Blanche Crozy (Crozy).—Broad pointed petals, pearly white.

Boule d'Or (Calvat).—Japanese incurved ; broad incurving petals, straw-yellow and dull red, dwarf.

Cactus (Crozy).—Purple, dull red.

Cardinal Lavigerie (Ricard).—Coppery red and dark red.

Cascade Tramesègue (Chantrier). — Japanese ; creamy white, tubulated.

Castelbat (Chantrier).—Japanese ; velvety red.

Chimboraca (Chantrier). — Canary-yellow centre, brighter outside.

Célèbre Rémus (Chantrier).—Japanese incurved ; creamy white, edged rose.

C. Harman-Payne (Calvat). — Japanese ; large blooms, very long drooping petals, dark purple, spotted white. First-class certificate N.C.S.

Chamechaude (Calvat).—Incurved ; dark carmine-amaranth, reverse silvery, almost white, late.

Ch. Burdin (Parent).—Japanese ; broad petals, coppery brown, tipped gold.

Chevalier Noémy Boulet (Délaux).—Japanese ; broad petals, dark golden, shaded red.

Chrysanthémiste d'Evère (Délaux). — Japanese ; long drooping petals, amaranth-purple, centre silver-white, tipped gold.

Colonel Dreyssé (Chantrier).—Bronzy red, centre and reverse golden.

Comtesse de Tournon (Boucharlat). — Incurved ; broad petals, white and rose, passing to rose at tips of petals.

Conseiller Forichon (Bruant).—Velvety red, reverse silvery.

Côte d'Or (Crozy).—Broad petals, yellow, reverse ochre.

Crépuscule (Lacroix). — Japanese ; outer petals semi-tubulated, carmine-violet.

Damase (Parent).—Japanese incurved ; cinnamon, tinted carmine-rose, centre carmine-violet.

D'Artagnan (Lacroix). — Japanese ; chestnut-red, centre lighter, slightly hairy at times.

Deuil du Président Carnot (Crozy).—Tubulated, purple-violet-lilac.

Directeur Tisserand (Calvat).—Japanese ; ochre-golden yellow, centre dark crimson, striped yellow. First-class certificate N.C.S.

Dr. Chiron (Parent).—Japanese incurved ; red.

Dominateur (Boucharlat). — Broad petals, light purple-red.

Duchesse de Grammont (Reydellet). — Japanese ; long, broad petals, very light rosy mauve.

E. Forgeot (Forgeot).—Japanese incurved ; amaranth-violet, reverse silvery white.

Etoile de Champrousse (Calvat).—Japanese ; bright orange-red, reverse golden yellow, early.

Elise Brice (Délaux).—Japanese ; carmine-amaranth-violet, edged silvery white, centre silver.

Enfer (Boucharlat).—Velvety crimson.

E. Rosette (Délaux). — Japanese ; broad petals, bright yellow, lightened canary.

Etincelant (Lacroix).—Japanese ; outer petals semi-tubulated, bright chestnut-red, reverse golden.

Exposition d'Arras (Reydellet). — Japanese incurved ; broad petals, orange, striped yellow, reverse golden yellow, passing to lemon-yellow towards the edge.

Exposition de Lyon (Crozy).—Broad, slightly recurving petals, bright purple-red.

Feu Américain (Chantrier).—Incurved ; globular flower, garnet-red, reverse old gold.

Fleur d'Ivoire (Bruant).—Ivory white, globular flowers.

Frédéric Tardy (Reydellet).—Japanese ; long, rather broad petals, vermillion, passing to brown at tips and on the reverse.

Gabriel Delorme (Parent).—Japanese ; old red, early.

Ganymède (Lacroix).—Incurved ; resembles Baron Hirsch in form, but the colour is lighter, reverse golden.

Général Jacqueminot (Crozy). — Broad petals, colour resembles that of the Rose General Jacqueminot.

Général Mauric (Chantrier). — Rose on cream ground, tips lemon.

Guito (Bruant).—Silvery light rose and amaranth.

Gustave Henry (Crozy) — Broad goffered petals, purple-amaranth, reverse silvery at tips.

Hébé (Lacroix). — Flesh-white, striped lilac in centre.

Heliotrope (Délaux). — Japanese incurved ; broad petals, rosy heliotrope colour, reverse silvery, tipped old gold.

Hémisphère (Hoste).—Long petals, bright fiery red, reverse and tips gold.

Illumine (Crozy).—Long petals, golden ochre and red.

Ingénieur Oddos (Crozy).—Broad drooping petals, Adrianople red.

Ingénieur Parandié (Crozy).—Broad cupped petals, dark carmine-rose, reverse silvery white.

Jean sans peur (Boucharlat).—Tubulated petals, silvery violet, tipped dark purple.

Julie Beauthéac (Lacroix). — Soft rose, reverse striped violet.

L'Aigle des Alpes (Calvat).—Japanese incurved ; crimson-red, reverse gold, broad drooping petals, early.

L'Améthiste (Calvat).—Japanese incurved ; dark violet, reverse silvery, broad incurving petals.

L'Echevelé (Calvat).—Japanese ; crimson-red, reverse gold, long flat drooping petals.

L'Etendard (Calvat).—Japanese ; pure white, long drooping petals.

L'Hiver Fleuri (Délaux).—Long broad petals, white, edged rose.

L'Yéemen (Chantrier).—Japanese ; lilac, spotted lighter, reverse old silver.

La Garonne (Lacroix).—Broad petals, rose, with cream centre.

La Maladetta (Lacroix).—Japanese ; long tubulated petals, pure white.

La Savoie (Parent).—Japanese incurved ; long broad petals, white and mauve, tinted lemon in the centre.

Le Fringant (Lacroix).—Broad petals, dark chestnut-red, reverse golden.

Le Laverna (Chantrier).—Japanese ; globular flower, lilac on ivory-white ground.

Le Moucherotte (Calvat). — Japanese incurved ; brownish-red, reverse yellow, broad petals.

Le Mouné (Chantrier).—Lilac, silvery reverse.

Le Pernas (Chantrier).—Japanese ; canary-yellow.

Le Puy Morent (Chantrier).—Orange, centre old gold.

Le Renégat (Chantrier).—Globular flower, old gold-yellow, shaded brick-red.

Le Savignac (Chantrier).—Japanese ; soft rose on a cream ground, petals edged bright rose.

Léon Bourgette (Boucharlat).—Very broad petals, ivory white, striped purple.

Lesbie (Chantrier).—Soft rose, almost flesh colour, reverse silvery.

Lucienne Bruant (Bruant).—Japanese ; rose, tipped white, centre lightened primrose-yellow.

Lutilloux (Chantrier).—Japanese ; bright brick-red, reverse old gold.

Mme. A. Borie aîné (Hoste).—Semi-tubulated petals, pure white and pearly white.

Mme. Adrien Charreyron (Bruant).—Light magenta, reverse tipped green and gold.

Mme. Albert Giniez (Rivoire).—Japanese incurved ; light crimson, shaded purple, reverse old gold, broad petals.

Mme. Amélie Planchon (Bruant).—Lilac-mauve, rose, striped and shaded pearly white.

Mme. Antonin Bonnefous (Hoste).—Incurved ; broad petals, soft rose, reverse white.

Mme. Auguste Nonin (Bruant).—Light red, reverse coppery yellow.

Mme. Camille Prost (Crozy).—Carmine-mauve, reverse grey.

Mme. C. Champon (Calvat).—Reflexed ; rosy white, centre cream.

Mme. Ch. Grimbert (Crozy).—Broad petals, bright carmine-rose, reverse silver.

Mme Ch. Perrin des Isles (Hoste).—Semi-tubulated petals, soft rose and cerise, striped white.

Mme. de Beauve (Reydellet).—Japanese Anemone ; guard florets white, centre white, tinted straw-yellow.

Mme. de Bruguère (Délaux).—Japanese ; long petals, pure white, centre cream.

Mme. Dreuillet (Lacroix).—Incurved ; rosy buff, centre straw-yellow, good form.

Mme. Drumont (Crozy).—Broad petals, brigh violet-mauve, reverse silvery.

Mme. Edmond Foy (Bruant).—Drooping outer petals, red, striped yellow.

Mme. Elisa Pariès (Chantrier).—Japanese ; drooping petals, pure snow-white.

Mme. Evrard (Crozy).—Broad pointed petals, violet-rose.

Mme. Ernest Capitant (Calvat).—Reflexed ; red or dark old rose, reverse gold, broad flat petals.

Mme. Frédéric Humbert (Reydellet).—Japanese ; long, drooping petals, garnet-red, reverse bronzy-red.

Mme. G. Merlin (Calvat).—Tubulated variety, long petals, creamy-white.

Mme. Hamont (Reydellet).—Japanese incurved ; globular flower, bright mauve-rose, reverse slightly silvery.

Mme. Henri Constant (Reydellet).—Japanese ; long petals, soft flesh-pink, centre cream.

Mme. Henri Mesnier (Calvat).—Japanese ; broad drooping petals, pure white, dwarf and late.

Mme. H. Martinet (Délaux).—Japanese ; broad, laciniated petals, rose-violet, tipped golden yellow, reverse silvery.

Mme. James (Délaux).—Japanese ; silvery white, lightened rose, reverse lilac-rose, centre cream.

Mme. Jane Lévy Alvarez (Bruant).—Silvery white, striped rose, tipped garnet-red, reverse tipped gold.

Mme. Lawson (Chantrier).—Incurved ; ivory-white, marbled with rose.

Mme. Legris (Crozy).—Long petals, dark rose, centre lighter.

Mme. Louis Lacroix (Lacroix).—Japanese ; broad petals, centre ones incurving, soft rose, lighter reverse.

Mme. L. Rousseau (Reydellet).—Incurved ; bright dark purple, reverse white, slightly tinted rose.

Mme. M. Giroud (Calvat).—Creamy white, centre yellow, tubulated petals.

Mme. Marguerite Réau (Bruant).—Crimson-red, reverse light bronze.

Mme. Odier (Chantrier).—Japanese ; old gold on a fiery rose ground.

Mme. Paladhine (Reydellet). — Japanese ; long, broad, drooping petals, centre ones shorter, white, tinted straw.

Mme. Philippe Rivoire (Boucharlat).—Japanese ; ivory white.

Mme. H. de Rovira (Rivoire).—Japanese ; purple-rose, tipped flesh-pink, semi-tubulated petals.

Mme. Rézal (Crozy).—Dark rose, shaded flesh colour and cream.

Mme. Rouvière-Houlès (Lacroix).—Japanese ; rose, lighter at tips.

Mme. Vincent Marchand (Marchand). — Broad petals, light sulphur-yellow, centre mauve.

Madeleine Lemaire (Bruant).—Light red, edged gold, base of petals golden yellow.

Mlle. Amélie Clerget (Bruant).—Carmine-red, reverse silvery white.

Mlle. C. Challier (Parent).—Japanese incurved ; pearly white.

Mlle. Delimoges (Reydellet). — Japanese ; long, drooping petals, soft mauve-rose, centre tinted yellow.

Mlle. Dumas (Parent).—Japanese incurved ; broad petals, pure white.

Mlle. Louise Blache (Hoste).—Soft lilac-rose, white centre.

Mlle. Louise Lestournel (Chantrier).—Bright lilac.

Mlle. Marie Gautier (Chantrier).—Japanese incurved ; creamy white.

Mlle. Nini Pomet (Chantrier).—Japanese ; bright lilac-rose, reverse silvery.

Mlle. Renée Aussée (Héraud).—Orange-buff, shaded gold, reverse pale yellow.

Mlle. Rouvière-Houlès (Lacroix).—Incurved ; long petals, flesh white, outer ones striped light violet.

Mlle. Valérie Héraud (Héraud).—Long petals, creamy white, shaded purple-violet on the edges of petals.

Marie Louise (Crozy).—Broad petals, flesh colour, passing to white.

Marie Thérèse (Délaux).—Japanese; centre dark crimson, broad petals of dark ochre-yellow.

Marquise de Candolle (Rivoire).—Japanese; broad petals, crimson-red, shaded purple in centre.

Maurice Gojon (Parent).—Japanese incurved; brownish red, reverse gold, outer petals drooping.

Mélina Duchanel (Crozy).—Broad petals, flesh-pink.

Michel-Ange (Cotille).—Japanese; reddish golden yellow, tipped vermillion, shaded velvety purple.

Misses Oxenham (Délaux).—Japanese; long petals, violet-rose, reverse silvery.

Mgr. Jauffret (Chantrier).—Japanese; bishop's violet, late.

M. Camusat (Hoste)—Japanese; dark velvety garnet-red, reverse flesh-white.

M. Carniaux (Reydellet).—Japanese incurved; broad petals, light rose, reverse white.

M. Catros Gérand (Chantrier).—Old gold yellow, edged red, centre bright gold.

M. Cabanès (Calvat).—Japanese; soft lilac-rose, reverse silvery, broad petals.

M. Chénon de Léché (Calvat).—Japanese; old rose, drooping petals, dwarf. Commended N.C.S.

M. Constant (Reydellet).—Japanese incurved; long petals, dark vermillion, reverse coppery golden yellow.

M. Ch. Delahousse (Hoste).—Incurved; broad petals, dark amaranth-violet, reverse white, centre same colour.

M. de Bruguère (Délaux)—Japanese; broad petals, bronzy brick-red, centre old gold.

M. Demay-Taillandier (Calvat).—Japanese incurved; red, with light bronze reverse, broad petals.

M. Desblanc (Reydellet).—Japanese incurved; globular flower, old vermillion-red, passing to straw-yellow, centre golden.

M. Dreuillet (Lacroix).—Broad petals, golden yellow, centre burnt sienna, dwarf.

M. Dutil (Délaux).—Japanese; broad petals, yellow, flamed and edged violet-red, reverse light canary.

M. Ernest Ausset (Reydellet).—Incurved; bright dark carmine, reverse and tips silvery light carmine.

M. Eugène Henriquet (Reydellet).—Incurved; globular bloom, bright vermillion, reverse golden yellow, passing to rosy white.

M. Fernand Denis (Ricard).—Globular flower, rose, shaded white.

M. Foukouba (Carrière).

M. François Pollet (Reydellet).—Japanese; long broad petals, light magenta-rose, reverse white.

M. Georges Jager (Héraud).—Dull purple, shaded velvety violet.

M. Gribaldo Nicola (Hoste).—Bright poppy-red, petals edged yellow, reverse golden.

M. G.-H. de Clermont (Calvat).—Japanese; brownish yellow, striped red, long petals.

M. H. Vanderlinden (Calvat).—Japanese; light yellow, long petals.

M. J. Ginet (Calvat).—Reflexed; carmine-amaranth, reverse silvery, broad petals, early and dwarf.

M. Lawson (Chantrier).—Japanese; bright violet.

M. Léon Dabat (Calvat).—Japanese; bright carmine-lilac, reverse almost white, spotted white, dwarf.

M. Léon Grosjean (Délaux).—Japanese; silvery white and violet-rose.

M. Louis Neyret (Reydellet).—Japanese incurved; long broad petals, dark carmine-rose, reverse silver.

M. Marty (Chantrier).—Creamy white, centre edged bright lilac.

M. R. Ballantine (Calvat).—Japanese; carmine-lilac, reverse silvery, very long petals, early. First-class certificate N.C.S.

M. Ricard (Ricard).—Long petals, white.

M. Rivière-Houlès (Lacroix).—Brownish red, reverse old gold, incurving petals.

M. Rouzier (Héraud).—Semi-tubulated petals, golden bronze, tipped velvety red.

Mrs. H. J. Jones (Calvat).—Japanese incurved; pearly cream white, tinted rose and yellow, broad petals. First-class certificate N.C.S.

Négresse (Crozy).—Broad petals, dark purple, almost black.

Paul Bruant (Bruant).—Japanese; light red, reverse light bronze.

Perle de Mandoue (Calvat).—Japanese incurved; dark golden yellow.

Pierre Sorgue (Chantrier).—Flesh colour, marbled with rose, lemon centre.

Plateau de Tech (Chantrier).—Japanese; sulphur-white.

Pluton (Lacroix).—Japanese; velvety dark blood red, reverse brick-red.

Préfet Albert Delpech (Délaux).—Japanese incurved; long petals, dark crimson, centre old gold.

Président Demay-Taillandier (Reydellet).—Japanese incurved; broad petals, light mauve, passing white, centre yellow.

Président Carnot (Calvat).—Japanese; yellowish buff, reverse paler, long petals, dwarf and early.

Président Léon Say (Calvat).—Japanese incurved; bronzy yellow, reverse golden. Commended N.C.S.

Président Reverdy (Bruant).—Bright yellow, centre golden.

Professeur Lachmann (Calvat).—Japanese incurved; amaranth, reverse silvery, broad petals. First class certificate N.C.S.

Professeur Mathieu (Reydellet).—Japanese; flat petals, Bordeaux red, passing to old rose at the tips.

Ratapoil bicolor (Crozy).—Anemone; long petals, brick-red, suffused ochre-yellow.

Reine Beatrix (Chantrier).—Japanese; dark lilac, marbled with white, reverse light lilac, dwarf.

Reine d'Angleterre (Calvat).—Japanese reflexed; mauve with silvery reverse, drooping petals. First class certificate N.C.S.

Rosette (Chantrier).—Japanese; bright lilac, approaching rose, tips white, reverse old silver.

Rosiériste Lévêque (Crozy).—Broad petals, magenta-amaranth, reverse rose, tipped silver.

Saturne (Lacroix).—Incurved; bright red, reverse golden, good form.

Secrétaire-Général Delaire (Calvat).—Japanese incurved; old rose, reverse straw yellow, lightened rose, dwarf.

Sénateur Silhol (Héraud).—Broad petals, golden red, rosy reverse.

Sœur Marcelina (Chantrier).—Colour rosy flesh.

Soleil de la Tronche (Calvat).—Golden yellow and reddish brown, dwarf.

Souvenir Ch. Roissard (Parent).—Japanese; purple-violet, reverse silvery, broad petals.

Souvenir de Chambéry (Délaux).—Anemone; purple-amaranth, tubes yellow.

Souvenir de l'Oseraie (Ricard).—Magenta light violet, striped white.

Souvenir de Jules Richard (Lacroix).—Japanese; long tubulated outer florets, flesh-white.

Souvenir de M. Castagnet (Chantrier).—Old gold yellow, edged brick-red.

Souvenir de Mme. Boutreux (Chantrier).—Japanese incurved; flesh-pink, reverse silvery white, tipped lemon.

Surprise (Calvat).—Japanese; carmine-amaranth, reverse silvery, drooping petals, early and dwarf.

Surpasse Mars (Lacroix).—Pure yellow, colour very bright, a strong grower.

Superbum (Boucharlat).—Broad petals, pure violet, tipped silver.

Tendresse (Lacroix).—Broad petals, rosy white, cream centre.

Triomphe de Marthe Bocher (Chantrier)—Snow white.

Triomphe de Mlle. Chatenay (Chantrier).—Japanese; cream and flesh-pink.

Vainqueur du Dahomey (Crozy).—Purple-red, reverse golden ochre.

Vallée Albarès (Chantrier).—Japanese; old gold, passing to coppery yellow.

Vesta (Lacroix).—Outer petals flesh white, edged violet, centre salmon-rose.

Vice-Président Viennot (Crozy).—Tubulated petals, dark violet-amaranth, reverse tipped silver.

Victor Boutreux (Reydellet).—Broad pointed petals, garnet-red, passing to brownish red, reverse bronzy yellow.

Viticulteur Veyrat (Parent).—Japanese; fiery red, broad petals, spotted and tipped gold.

Volcan (Lacroix).—Long petals, velvety blood-red, reverse tipped old gold.

C. Harman-Payne.

Chrysanthemum Mrs. J. R. Pitcher.—This early-flowering Japanese variety is deserving of some attention where pure white blossoms are in request. The flat petals are nicely formed, exhibiting no roughness whatever, but a perfectly smooth surface, quite suitable for employment in the making of wreaths and such like.—E. M.

Chrysanthemum Mme. C. Desgrange.—Although at all times useful, especially for the filling of vases, this early-flowering Chrysanthemum has not been so good out of doors this season as it was last year. The long-continued dry weather experienced directly after the plants were put out was not favourable to early progress. This, coupled with the continuously cold, showery weather early in August, was again most objectionable to that steady progress which results in that vigorous, yet firm growth which is so desirable in the production of a full crop of well-formed blossoms. Where the soil in which the plants are growing is heavy and retentive in character, a continuance of showery, cold weather acts injuriously on the foliage, causing it to die for some considerable distance up the stem. A retention of healthy leaves goes a long way to produce blooms of desirable quality.—E. M.

SHORT NOTES.—CHRYSANTHEMUMS.

Early Chrysanthemum M. Dupuis.—This is a very useful sort to flower in the open. It is dwarf and exceedingly free-blooming. The flowers are of medium size and of a bronzy yellow colour. It belongs to the Japanese section.—H.

Chrysanthemum Souvenir de Petite Amie is a welcome addition to the list of dwarf varieties. Plants barely 2 feet high are crowned with very promising buds and clothed with sturdy foliage to the rim of the pots. It is pure white, in form not unlike Avalanche, and I think it will ultimately replace that popular kind.—H.

AUGUST IN SOUTH DEVON.

During the month of August the temperature has been rather under the average, the mean for the last nineteen years being 61·5°, while that for the past month was 60·1°. The lowest temperature on the grass (44·2°) was registered on the 25th, while the highest reading in the screen was 70·4° on the 19th and 30th. The rainfall, although the first thirteen days of the month were wet, was slightly below the average, being 2·78 inches against a nineteen years' average of 2·86 inches, and less than that of August, 1894, by 0·53 of an inch; while the phenomenal rainfall of August, 1891 (6·85 inches, with 21 wet days out of the 31), surpassed it by no less than 4·07 inches. During the past month rain fell on sixteen days, the largest amount recorded on one day being 0·66 of an inch on the 10th. From January 1 till September 1 16·55 inches of rain have fallen, against an average of 20·96 inches and 22·50 inches in 1894.

The sun has shone for 188 hours exactly, against a yearly average of 187 hours 40 minutes, and 156 hours 35 minutes in August, 1894. From January 1 to September 1 1430 hours 30 minutes have been registered against 1208 hours for the same period in 1894. The month has been remarkably windy for August, the total horizontal movement of the wind being 7110 miles, the highest velocity being attained on the 27th, between the hours of 1 p.m. and 2 p.m., when the rate reached 29 miles per hour. On twenty-six days the wind has been southerly or westerly and on five days north to east.

The garden, aided by the rain at the commencement of the month, well retained its freshness. The scarlet Lychnis chalcedonica broke out into a second flowering, while the herbaceous Phloxes (dark red, white, salmon-pink, and white with claret eye) in large masses mingled with the tall white spires of Galtonia candicans and the vivid scarlet and gold of the Torch Lily's heads of blossom.

Of Lilies but four varieties have been in bloom during the month, without counting L. chalcedonicum, which began to bloom in mid-July and is still continuing its display of shining red flowers into September. Of the four, L. auratum is perhaps the most striking. Some years ago I procured a batch of home-grown bulbs, for which a bed was specially prepared and each bulb carefully cased in sand. Not being particularly pleased with the appearance of the bulbs in question, I wrote to the consigner on the subject, and about Christmas received from him a small lot of imported bulbs, which, being of the opinion that importations usually failed after the first year, I planted in ordinary garden soil without taking any

special precautions for their welfare. The home-grown bulbs flowered feebly the first season, and have since given no sign of their existence; the imported ones bloomed tolerably at their first flowering, and have increased in beauty with each succeeding year. Some have the ordinary yellow band, some the red band, and one is virginale, the white variety, while two have proved to be the white-petalled variety called by nurserymen platyphyllum. The stately L. superbum has also been an object of great beauty, its tall stems and pyramid of purple-spotted orange flowers being exceedingly effective. It is grown in a partially shaded and wholly sheltered bed, the soil of which is peat, and is plentifully supplied with moisture during the growing season. L. tigrinum splendens and flore-pleno have been good, and both varieties are easily increased by the bulbils which are formed at the axils of the leaves. The Bermuda Lily (L. Harrisi), growing by the water, has also been a success, its long white trumpets hanging gracefully over the streamlet. The yellow Paris Daisies have become large bushy plants by August, and covered with their pale sulphur stars are exceedingly decorative in the garden and admirably adapted for affording a lasting supply of cut flowers, as they bloom without intermission until cut down by the frost. The Tropæolums have been at their best, T. canariense covering an old Aucuba bush with its bright yellow blossoms, while T. speciosum, which after many trials seems at length to have established itself in the garden, has threaded through a climbing mass of Eccremocarpus scaber, whose orange-red flowers are rendered dull in comparison with the vivid scarlet of its brilliant blooms. T. tuberosum rarely begins its flowering season before the latter half of the month, but when in full bloom is a beautiful sight with its long-stalked scarlet and yellow blossoms showing effectively against the thick background of lobed leaves. This Tropæolum will often grow 10 feet high in the course of the summer, and is seen at its best when rambling over climbing Roses in graceful festoons; it increases very rapidly, one tuber often producing as many as fifty in a year. A good variety of T. Lobbianum has been planted by the house, and, being a rapid climber, has mingled its scarlet blossoms with the white clusters of a Solanum jasminoides that has already reached the eaves. In a low-lying portion of the garden Gunnera scabra, varieties of the Acanthus, Cannas, Ricinus Gibsoni, and Zea variegata, backed by Bamboos and Arundos, with a tall specimen of Aralia spinosa standing Palm-like above the lower growing fine-foliaged plants, afforded a beautiful picture with their almost tropical outlines and restful shades of green. In the wild garden, a corner, in which the white bells of Galtonia candicans rise from out a large clump of Salvia patens, mingled with which are bronze-leaved plants of the Ricinus, is exceedingly effective. From another mass of the blue Salvia tall spikes of Lobelia cardinalis tower nearly 5 feet high. The white Japanese Anemones, which have been smothered with their chaste golden-anthered flowers, have attained a stature of over 5 feet 6 inches, and the Golden Rod has associated its yellow panicles with the flower-wands of tall blue Monkshoods, which have been in bloom, more or less, since the spring. There is a lavish display of yellow in the herbaceous border during August, the perennial Sunflowers, H. multiflorus and the double variety Soleil d'Or, together with H. rigidus and their large annual relative, as well as Rudbeckia Newmanni, Coreopsis lanceolata, and the last blooms of Alstrœmeria aurea, making the chief note of colour in the garden a golden one, whilst scarlet is supplied by the Zinnias, Pelargoniums, tuberous Begonias, and the brilliant Gladiolus brenchleyensis, sheaves of many-flowered spikes of the latter blooming amongst the sweet-scented Nicotiana. The breadths of Salpiglossis were even finer than in July, and the pale blue masses of Agathæa cœlestis supplied a colour rare at the time, and only to be found by the waterside, where in the shade the water Forget-me-not still blossomed. The orange-scarlet Montbretias, in constant request for indoor decoration, have flowered equally effectively in the open and in the shady spaces of the wild garden, while of other flowering plants, the Ivy-leaved Geraniums, Lavateras, blue Cornflowers, white Antirrhinums, the white Galega, Chrysanthemum maximum, Tradescantia virginica, white and crimson Clove Carnations, and in the rockery, Plumbago Larpentæ and many Mesembryanthemums may be mentioned, the latter, however, not taking as kindly to the heavy soil as to a lighter and more friable compost, a vermillion variety that I procured at the Cape persistently refusing to flower. Large bunches of Hydrangea hortensia have been, and still are, a mass of blossoms ranging from pink to light blue, and the Cactus Dahlias, Juarezi of the older varieties, and Lady Penzance, Delicata, and Matchless of the newer, have been much admired. Tea Roses, although attacked by mildew, have continued to flower well, and no day has elapsed since the commencement of May that a basketful could not have been gathered. Two Roses that are especially noteworthy at the present time are the copper Austrian Brier, that is flowering for the second time, and the single white Macartney, which when arranged together make a most charming contrast. The Sweet Peas are in the zenith of their glory, the newer kinds being certainly a great advance both in colour and size. When used largely for indoor decoration the varieties should be grown separately.

S. W. F.

Ferns.

STRONG-GROWING HYMENOPHYLLUMS.

The culture of Hymenophyllums is generally, but erroneously, considered difficult, yet when placed under favourable conditions they grow as well as any other Ferns and with much less attention than most plants require. If we except two handsome species, viz., H. pulcherrimum, from New Zealand, and H. fuciforme, from Chili and Juan Fernandez, we find that all the Hymenophyllums known to this day are of creeping habit and provided with shallow-rooting rhizomes, which, contrary to those of Trichomanes, are smooth and of a wiry nature, delighting in growing on the surface of a rock, or a piece of sandstone and running under the Moss which covers it. Most of them, if not all, are natives of climates naturally cool and humid, growing where they are permanently subjected to the influence of shade and moisture, and also a comparatively cool temperature. The most satisfactory results of artificial cultivation of Hymenophyllums in accordance with their growth under natural conditions are shown by the fine specimens in the ferneries of Messrs. J. Backhouse and Son, of York, some plants from which have from time to time been shown in our London exhibitions, when they never fail to receive from the public the attention which they richly deserve.

Although their foliage is apparently of a delicate nature, Hymenophyllums are particularly well adapted for growing in Fern cases in the dwelling-house. We are here forcibly reminded of the plants of H. demissum fully 3 feet through which were grown by the late Mr. J. Cooper Forster in the north windows on the staircase of his house in Upper Grosvenor Street, where they formed immense masses of fronds, retaining their vitality for several years. The same may also be said of the magnificent specimen of H. pulcherrimum which was grown in a window case and exclusively in a cold room by Mr. J. F. Marchant, of 59, Berners Street.

Hymenophyllums, like Todeas and Trichomanes, require but little light, and a great depth of soil is unnecessary. As has been stated, they luxuriate in constant moisture, but this should be produced more by means of condensation than by mechanical waterings, as the species with hairy or woolly foliage greatly suffer from being wetted overhead. The compost in which they delight is one composed of about equal parts of sandy peat, chopped sphagnum, and small pieces of sandstone, with an additional sprinkling of coarse crock dust. Such a compost is usually of such a light and permeable nature, that it cannot become sour through the accumulated moisture from the repeated waterings which may be necessary to produce condensation. Their propagation is usually effected by the division of their rhizomes, which operation is safe enough if a little attention is paid to the subjects operated on, but it is one requiring a little patience, as in a young state these plants grow very slowly.

H. caudiculatum (here illustrated) is undoubtedly one of the most striking, as also one of the handsomest, of cultivated Hymenophyllums. As is the case with nearly all the plants belonging to this most interesting genus, its remarkably elegant fronds, of a very transparent nature, are produced from thin, wiry rhizomes running on the surface of the ground or on a decaying piece of Tree Fern, on which the plant may be growing. They vary from 6 inches to 18 inches in length and from 3 inches to 4 inches in width, and are broadly winged from their summit almost to their base. Their numerous divisions, and also to a certain extent their extremities, are furnished with a tail, which character has suggested the specific name of caudiculatum. Although a native of Chili, Peru and Brazil—where it is found growing naturally among decaying vegetable matter or on mossy trees—it thrives under cool treatment, and it is most gratifying to record that a plant of it in Messrs. Veitch's nurseries at Chelsea, having come through the rigours of last winter and been subjected to a long period of severe frost, has this season produced some excellent growths and preserved all its older fronds.

H. crispatum—a very distinct plant, a native of Tasmania and New Zealand, where it is frequently found clothing the stems of Tree Ferns—is readily distinguished from nearly all other species through the distinctly crisp wing which is peculiar to the margins of the stalks of its erect fronds, which are 4 inches to 8 inches long, dark green, smooth, and three times divided nearly to their midrib into narrow, blunt segments, of a very transparent nature. It is said to be found also in Nepaul, Ceylon and Luzon.

H. demissum.—This species, which is probably the most effective of the whole genus, and also the easiest one to grow, has a very wide range of habitat, being found in New Zealand, Fiji, Java, as well as in the Philippine and adjacent Polynesian Islands. Wherever any attempt at growing Filmy Ferns is made it is sure to be found. Its finely-divided fronds (6 inches to 12 inches long and 3 inches to 4 inches broad) are borne on firm, upright, wingless stalks of a wiry nature. The lively green colour peculiar to them when they are young turns to a deep dark green with age, and the plant deserves special attention at the hands of the cultivator on account of its vigorous habit and good constitution.

H. dilatatum.—This is the largest growing and also one of the noblest-habited plants belonging to the genus. Its beautiful and extremely translucid fronds, of a pale green colour when young, are particularly graceful, the weight of their broad leaflets causing them to droop in an elegant manner. They are produced from a slender creeping rhizome, and are three times divided nearly to the midrib; their length, exclusive of the stalks, varies from 6 inches to 12 inches or more, and the stalk of their leafy portion is winged throughout, the wing being quite flat. It is found wild in the Samoan, Fiji, and other Polynesian Islands, also in New Zealand and Java, where it may be seen growing among Moss and decaying vegetable matter, and also on the trunks of dead

trees, especially of those lying in a horizontal position in close proximity to the water.

H. FLABELLATUM.—To the casual observer this lovely species, known also as H. nitens and nitidum, may appear simply as a variety of demissum. It is, however, totally distinct from it, and is very variable in size, compactness, and degree of elongation of its fronds, which in either in a young or in an old stage are of a peculiar glistening, bright green hue. According to the form, the fronds are from 4 inches to 15 inches long, including their round wiry stalks; they are divided three times nearly to the midrib, and somewhat resemble those of the popular demissum in outline, but their pinnæ, instead of being smooth, have a crisped appearance, produced by a contraction which is natural to them.

H. FLEXUOSUM.—This handsome and elegant species, with beautifully crisped and undulated foliage, somewhat resembling that of H. crispatum, is a native of New Zealand. Its broadly spear-shaped fronds are larger and more finely divided than those of that species, being from 10 inches to 12 inches long and borne on slender, distinctly winged stalks; they are four times divided nearly to the midrib and furnished with narrow and undulated segments.

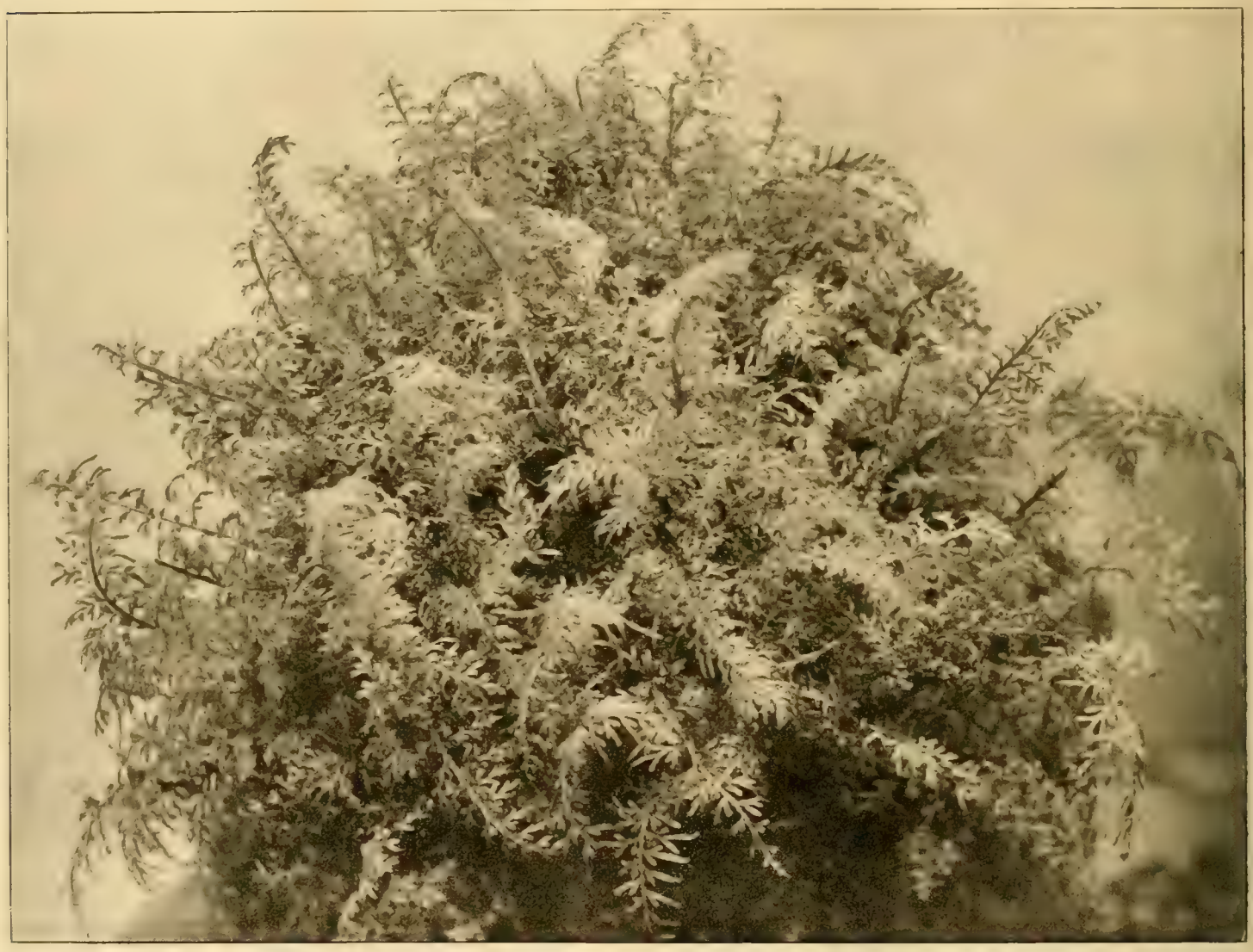
H. FORSTERIANUM.—A very free-growing plant, native of Brazil, whence it was accidentally introduced among some Cattleyas. It has somewhat the general appearance of H. caudiculatum from its light green colour and prettily undulated nature; but its handsome fronds, which are produced in great abundance, attain much larger dimensions and their pinnæ are not tailed like those of caudiculatum, and the wing along the midrib is so conspicuous that in well developed specimens it measures in the leafy portion a quarter of an inch in breadth.

H. FUCIFORME.—Unlike most other members of the genus, this handsome species, which ranks among the strongest-growing kinds known, is devoid of slender rhizomes. It is a native of Chili and Juan Fernandez, where it is found growing on trunks of trees in shady woods. Its upright-growing fronds, of a glaucous colour and 1 foot to 2 feet long and 4 inches to 6 inches broad, are borne on strong erect stalks, narrowly winged above and round below; they are produced from thick, short decumbent rhizomes which have all the appearance of crowns. Their lower segments are two or three times forked.

H. POLYANTHOS.—This is probably the most cosmopolitan of all known Hymenophyllums, it being very widely distributed and found in a wild state: in West Tropical Africa—Mauritius and Madagascar; in America—from Cuba and Jamaica southward to Brazil, South Chili, and Juan Fernandez; in Asia—Nepaul and Sikkim to Ceylon, Tsus-Sima, the Malayan Peninsula, Java, and New Zealand. Its finely-divided fronds, 3 inches to 10 inches long, 2 inches to 3 inches broad, are borne on slender, wingless stalks 2 inches to 3 inches long, and the stalk of their leafy portion is usually only narrowly winged above. This species does not require such a close atmosphere as most other kinds; the most airy place in the house suits it best. On account of the propensity which its exceedingly slender, wiry rhizomes possess of making their way through partly decayed vegetable matter and also on account of the elegantly arching character of its fronds, it is one of the best kinds for growing on Tree Fern stems or on blocks of wood.

H. PULCHERRIMUM.—The lovely fronds of this comparatively rare species, native of New Zealand, where it is found growing on trunks of trees, are produced from a thick and closely-set crown and borne on erect stalks 3 inches to 6 inches long, of a wiry nature, and winged to the base. They are 6 inches to 18 inches long, 4 inches to 6 inches broad, three or four times divided nearly to the midrib, and of a very graceful habit, not being exactly pendulous, but arching over in a most agreeable manner through the weight of their leafy portion.

H. SCABRUM.—This beautiful species, native of New Zealand, is one of the most distinct, owing to the stiff hairs of a rusty brown colour with which the wiry stalks of its fronds are densely clothed.



Hymenophyllum caudiculatum. From a photograph by Miss Willmott, Warley Place, Essex.

Its handsome fronds, three times divided nearly to their midrib, are of a dark, dull green colour, which makes a very pleasing contrast with the hairs covering their stalks. Their length, inclusive of the stalks, varies from 12 inches to 18 inches, and they measure fully 5 inches in their broadest part. A somewhat airy place in the house is that which suits it best, and although it requires an abundance of water at the roots, it has the greatest aversion to being wetted overhead.

Other strong-growing kinds, such as interruptum, from the West Indies; Jamesoni, from the Andes of Colombia; javanicum, from Java, the Philippines, Ceylon, and Australia; Lindeni, from the Andes of Venezuela and Ecuador; myriocarpum, from Mexico and the Andes of Peru; pastoense, from the Volcano of Pasto, &c., if in commerce at all are very seldom met with in collections. S. G.

Fruit and Vegetable Crops.

NORTHERN.

Lowther Castle Gardens, Penrith.—Apples very thin crop indeed, having suffered from severe frosts in May. Pears on walls average crop. Plums above average, especially on walls. As an orchard fruit (with the exception of Early Orleans) Plums do not finish well, but on walls are always good here. Apricots are a failure. Strawberries average crop; The Countess, James Veitch and La Grosse Sucrée especially good. Black and Red Currants above average. Raspberries full crop. Gooseberries very heavy crop, although caterpillars have been very troublesome of late. Morello and sweet Cherries average crop. —F. Clarke.

Alnwick.—Apples are an exceptional crop and likely to be very fine; trees in splendid health. The dry weather does not appear to have had an injurious effect on the trees. Pears are very irregular. Apricots in some cases that I have seen here full crop. The trees have lost an extra large number of branches this year. Strawberries are grown extensively in this district, Noble and John Ruskin being grown for early use, Sir Joseph Paxton for the second early and McMahon is the very best late. The crop this season is very heavy. Raspberries are a heavy crop. Gooseberries are an enormous crop and of fine quality. Red and Black Currants are exceptionally fine. Peaches are also full crop on walls. Altogether, we have one of the finest crops of fruit that we have had for many years.

Potatoes, where not injured by frost, are turning out well. Potato crop generally is looking well. I have not heard of any disease.—George Harris.

Wigganthorpe, Yorks.—The fruit crops in this district are not heavy, but on the whole there is not much to complain of. The trees in spring were not so thickly covered with bloom as they were last year, and although we had no May frosts to destroy it, some very strong north winds did great damage, especially to trees in exposed situations, not only by destroying a quantity of bloom, but the foliage as well, shrivelling it up as though it had been burnt. May was a very dry month, and in many cases trees that carried much bloom set but little fruit. Doubtless the dry weather had something to do with this, it not being conducive to a fine set. Apples are a fair average crop, the best being Lord Suffield, Cellini, New Hawthornden, Cockpit, Manks Codlin, Keswick Codlin, Stirling Castle, Lane's Prince Albert, Cox's Pomona, Tower of Glamis, and Burr Knot; the last-named is a local Apple, and one that bears every year; this season it is bearing a heavy crop, after severe thinning. It is a cooking Apple, in use during October and November, and though not one of the best, it is worth growing on account of its free bearing qualities. Pears are a very poor crop, only a few trees bearing fruit; the best are Marie Louise, Beurré Clairgeau, Winter Nelis, Passe Colmar, and Glou Morceau. Plums are up to the average, Victoria bearing best; other kinds on wall are also fruiting well. Morello Cherries are a very heavy crop, but rather small. Strawberries have also done well. Raspberries, Red Currants, and Gooseberries have been very plentiful and good. Black Currants very few. Fruit trees of all kinds have not been much infested with insect pests until late in the season, when Plums and Red Currants were attacked.

Most kinds of vegetables have done well. Some sorts of early Peas suffered from the dry weather in May; since then all crops have grown away freely. Early Potatoes are a good crop, quite free from disease. While there has been so much complaint of the prolonged drought and its serious consequences in the south, we have been more favoured in the north. May was a very dry month, only 0·64 inch of rain falling; and although Strawberries and other small fruits, as well as vegetable crops and herbaceous plants, were beginning to suffer, heavy rains came just in time to save them. There has been no lack of moisture since then; in fact, there has been far too much rain—July being a very wet month, there having been twenty wet days, and a total fall for the month of 6·23 inches. Mildew is infesting late Peas, Onions, and other things, and I am afraid the late Potatoes and other crops will be injured if the wet weather continues. The severe winter did not do so much damage to garden crops here, there being several inches of snow during the greater part of the time, this doubtless preserving them. Great damage was done to trees and shrubs, especially the latter, a large number of the common and Portugal Laurels being killed nearly to the ground. The injury to these was not nearly so bad as at first appeared, as a large number of young conifers and other things that lost their old leaves and appeared dead, broke away again in spring.—J. S. Upex.

EASTERN.

Babraham, Cambridge.—The fruit crops here are the best we have had for some years, Apples especially being a heavy crop. Most sorts are carrying crops, noticeable being the Codlins, Prince Albert, Golden Noble, Grenadier, Flanders, Annie Elizabeth, Brabant Bellefleur, Quarrenden, Juneating, Ecklinville, Stone's, Tower of Glamis, Niton House, Hawthornden, Dumelow's, Mère de Ménage, and Cox's Orange. In most places these are all heavily laden; in fact all sorts grown hereabout where the wood was not over-strong are bearing. Pears are very thin except on walls; the cold wind must have destroyed them after they were set. Apricots suffered severely from the frost, the buds having become too forward. Plums, too, suffered in the same way, whilst those that escaped were further thinned by the cold wind. Victoria seems to have escaped well, and most trees of this sort are carrying a good crop, and Green Gages in same positions have a fair crop. The same with Damsons. Cherries are plentiful and good. Never saw trees less troubled with black fly. So far I have found insect pests less troublesome this year than any time before, probably on account of the severe weather, and so late in the season. Peaches and Nectarines are very good. Some unripened wood from last year got quite killed. Currants, Black and Red, Gooseberries, Raspberries, and Strawberries have all been good crops, but fruit, where no watering was done, was small; Nuts very plentiful.

Potatoes are still turning out well. Peas have been good; in fact, all vegetable crops are good where the cultivation has been properly attended to.—J. Hill.

Levemere Park, Bury St. Edmunds.—Though failures are not absent this year, I think we may say that the crop generally is over the average. The failures most felt here are those of Apricots and sweet Cherries. In both cases the trees lost almost all their buds from the severe frost. Apples are over average, most of the trees carrying heavy crops of fine and forward fruits. Many fell during the long drought, and the Apple blossom weevil has done much damage to the foliage. The ordinary preventive means can hardly be applied to bush trees which branch almost from the ground line, and birds, which are always over-plentiful here, do not help us much. Some varieties of Apples which are generally shy bearing have good crops, and of these I may mention Blenheim Orange, Hubbard's Pearmain, Ribston Pippin, Cox's Orange Pippin, and Gloria Mundi. Pears are a good average crop, Marie Louise, Louise Bonne of Jersey, Fondante d'Automne, and Williams' Bon Chrétien being amongst the best. Peaches and Nectarines under average. Plums are over average on most trees, the weight of crop depending more on the variety than on form or position. Strawberries over average. A long struggle with the drought was overcome by one or two good waterings. Besides older favourites, such as Vicomtesse and President, Noble and Latest of All were grand. Raspberries a grand crop in every way, and lasting over a long season. Many canes were killed, but these were more than replaced by young fruiting canes of the present season's growth, which have extended the season to this time, and promise to hold out for a week or two longer. The great success of this crop is a surprise to me, and is, I think, due to heavy annual mulchings which are never removed, and to non-disturbance of the roots. Apricots a total failure, and so, too, were sweet Cherries. Morello Cherries a fair average. Red and White Currants a good average crop. Black Currants over average. Gooseberries over average. Outdoor Fig trees were killed to the ground. Outdoor Grapes almost a failure, and many canes were killed. Medlars over average. Quinces total failure. Walnuts much under average. Damsons total failure. Tomatoes are doing well, but bright weather is needed to ripen up an excellent crop.

Potatoes in deeply cultivated soil are excellent, though in the fields they suffered severely from drought, and late varieties are making a second growth, which will be fatal to good quality and shape. I have lifted the early and second early kinds. Snowdrop is again very fine, and has given scarcely any small tubers. Another kind that has turned out well is Sutton's Supreme. Windsor Castle, too, though not yet lifted, cannot have failed to do well, the haulm showing unmistakable signs of a heavy crop. Peas have done but tolerably on the light soil here, and have been much troubled with thrips. In a neighbouring garden, however, where the soil is deeper and heavier, the crops have been fine. Ne Plus Ultra is now yielding well with me. Both Onions and Celery have done grandly. The latter has been well supplied with water, and will repay for the extra labour.—J. C. Tallack.

Coldham Hall.—On the whole the fruit and vegetable crops must be regarded as quite up to the average. Apples on espalier trees are plentiful and good in quality, while on large orchard trees there is an immense crop. Of Pears we have practically none. Plums and Damsons are about an average crop. Currants, Black and White, have been loaded with good fruit, but Red are not so good either in quality or quantity. Raspberries and Strawberries have borne excellent crops of fine fruit, the former being still plentiful. Gooseberries are plentiful where they escaped the caterpillars, which quite cleared a few of the older trees.

Vegetables of all kinds are abundant and good. The midseason Peas suffered a good deal from the effects of the drought, but the late kinds never looked better. Runner Beans and all root crops are looking well, but second early and late Potatoes are growing out.—H. Richards.

Hardwicke House, Bury St. Edmunds.—The fruit crop on the whole may be considered fairly good in and around this place. Apples are heavy and the quality excellent. Pears are rather

thin, and I fear will run small. Peaches and Nectarines are very good. Apricots are almost a failure, which can be accounted for by their being such heavy crops the last two years. Cherries have been very good, also Gooseberries and Currants of all kinds. Plums are rather below the average, but the quality is good. Strawberries suffered very much from the dry weather in May and June, but those that were well watered bore heavy crops. This place did not suffer from the frost in June, but the dry weather through June and the early part of July was very trying.

Peas looked like giving out altogether, but since the rain came they have started to grow and are promising well for a good late supply.—B. MARKS.

MIDLAND.

Abney Hall, Cheadle, Cheshire.—Excepting in the early part of the summer, we had not such a dry season, and things have not suffered so much from dryness as in some of the southern counties. Apples are plentiful everywhere; Pears likewise. Cherries quite a good average. Strawberries very good. Raspberries very good. Currants and Gooseberries have also been satisfactory crops. Regarding Plums, Victorias are very heavy crops, and this is one of the best kinds to grow in this district. The Czar (a medium-sized fruit a little earlier than Victoria) is a very good one also. Plums, however, do not do so well as to merit extensive planting in this district as they do in some of the warmer southern counties. Damsons have been rather extensively planted, and now they are bearing a very heavy crop.

Potatoes are good. Peas are good. Ne Plus Ultra, which we grow for main crop, is 8 feet high and full of produce. Carrots are very good this year, which is unusual. Onions also are fairly good. Some of the Brassicæ certainly have suffered rather badly from grub and clubbing, which they generally do; but, on the whole, I think we must record a very satisfactory year with all kitchen garden crops generally—as far as I can judge at present.—ROBERT MACKELLAR.

Knowsley, Derby.—Apples a very heavy crop and good. Strawberries splendid crop. Red Currants heavy crop. Black Currants moderate. Gooseberries average. Cherries very good. Pears average. Peaches, Nectarines and Plums average. Owing to the very hot, dry weather in May and June, a great many of the Apples fell off, but the rain has proved very beneficial to all fruit trees, and Apples in particular, for they promise to be especially good this year and the crop very heavy. All bush fruit has kept very free from blight, with the exception of a few caterpillars on the Gooseberries. Peaches and Nectarines have a fine crop and are swelling their fruit well. I picked the first Peaches outdoors on July 22—rather early, I think, for this district.—ROBERT DOE.

Hopton Hall, Wirksworth. — Enormous crops of all kinds of fruit grown outside set and swelled up. When rain set in Apples thinned themselves to a small extent. Every variety grown is carrying good crops. One pyramid of the Irish Peach is a picture; this never fails. Late Apples are very fine, as they were last season. Gooseberries, Red and White Currants very fine; Black Currants moderate. Raspberries enormous crops from an old stock grown here on the same ground over sixty years. Strawberries very prolific, President taking the lead on beds twelve years old.—G. BOLAS.

Thoresby Park, Notts.—The past severe winter was very trying to many of our vegetables; all the Broccoli were cut off and Savoys did not escape. Brussels Sprouts suffered severely, likewise Celery, although a good covering of Bracken was on the lines. When things began to grow they did not make the progress expected from the hot days, as the nights were very cold, down to freezing, when the day temperature was exceptionally high, and the dry weather has made most things later than usual. Fruit of all sorts is plentiful and of good quality. Plums grow fairly well, but our soil is very poor, sandy, and not at all a good Plum soil. It is not what would be considered a good fruit soil at all. Trees grow fairly well and fruit moderately well as a rule. This year we had a lot of bloom, which set well, and then one of those cold, sunless east winds came, when you could see many on the ground.—A. HENDERSON.

The Park Gardens, Alfreton, Derbyshire.—I am sorry I have not replied to your letter before, but have been from home. The fruit crops in these gardens are very good this year. Apples, on the whole, are a heavy crop. Pears medium. Plums abundant (especially Victoria on standards as well as on walls). The varieties that do best with us are Victoria, Kirke's, Jefferson, and Coe's Golden Drop; these are on walls. Victoria is carrying a heavy crop on standards as well. Green Gages are heavily laden; these are on walls. Damsons a good crop. Peaches (outdoor) good. Apricots only medium owing to being overcropped two years in succession. Cherries (sweet) have here a good crop; Morellos on wall heavily cropped. Raspberries, Strawberries, Gooseberries, and all small fruit have been abundant. Garden produce generally is up to the average of a good season, independent of the long drought and the frost of June 15, which did a deal of damage to gardens in the valleys. Runner and Broad Beans suffered much on that date. The fruit crops in the neighbourhood are also good, excepting in the very low districts, which suffered from the frost very much, and the vegetable crops in the cottagers' gardens could hardly be surpassed, specially amongst those who are exhibitors at the many shows around this part.—G. M. KNIGHT.

Barkby Hall, Leicester.—Apples are abundant everywhere in this district. Pears are only moderate. Plums not an average crop. Apricots scarcely any. Peaches and Nectarines poor, the young wood having been killed during winter. The fruit buds of the Apricots were also killed. Gooseberries and Currants are the heaviest crops we have ever had, but they suffered during the dry weather. Raspberries heavy crop and fruit fine. Strawberries extraordinary crop, but many plants died through drought.—J. LANSDELL.

Coddington Hall, Newark. — The fruit crops in this neighbourhood are generally satisfactory, in spite of the severe weather experienced in January and February and the drought of early summer. Apples and Pears are very plentiful, rather under average in size, perhaps, the foliage of Pears on walls, as well as of Plums and Damsons, being much affected with spider, owing not so much to lack of root moisture as to the arid atmosphere of May and June. Louise Bonne of Jersey, Thompson's, Marie Louise, Winter Nelis, Pitmaston Duchess, Beurré Clairgeau, Jargonelle, and many other standard sorts are laden with fruit. Such Apples as Keswick Codlin, Lord Grosvenor, King of the Pippins, Duchess of Oldenburg, and Lane's Prince Albert in orchards are all laden with clean, well-shaped fruit. Espaliers are carrying good crops, especially Fearn's Pippin, Ribston Pippin, King of the Pippins, Stirling Castle, Cox's Pomona, Cellini, and Mère de Ménage, and the trees are clean and healthy. Apricots are the scarcest crop I have ever known in this district; in fact, there are only a few fruits here and there. This I attribute to the severe frost coming on the immature wood and buds caused by the lack of sunshine the previous autumn. The trees, however, will doubtless benefit by the rest. Peaches on walls are a capital crop in our own garden, and the trees were never so healthy and vigorous. Hale's Early, Stirling Castle, and Dymond are my principal sorts on open walls, Amsden June doing exceedingly well as an extra early variety. Of Nectarines, Lord Napier does as well as any, nor does the fruit shrivel as it does under glass. Plums in our immediate neighbourhood are under average, although a few miles away trees are yielding good crops, especially the Victoria in market gardens. Cherries both on walls and on standard trees have been abundant and good, Black Tartarian and Governor Wood doing best in this garden. Morellos are a heavy crop and the fruit large. Strawberries bore heavily, but the drought just at the time the fruit set, and for several weeks after, did not allow the two-year-old plants to swell off their fruit to their normal size. All points considered, Gunton Park was my best all-round Strawberry, Lord Suffield also doing well. Gooseberries and Currants of all kinds have yielded most abundantly, so much so, indeed, that the market price has ruled very low. Raspberries have been very poor, the frost having crippled the canes.—J. CRAWFORD.

Euston Hall, Thetford.—Of Apples we have an abundant crop, which is swelling fast and promises to be of good quality. A large standard tree of Blenheim Orange is this season bearing a heavy crop, an unusual occurrence. Pears are scarcely up to the average, and Apricots are very much under. Peaches and Nectarines are good; the trees are clean and making excellent growth. Some of our trees are trained to galvanised wire on cemented walls, others trained with nails and shreds in the usual way to the bricks; these latter are generally very clean and more free from insect attacks than the former. Of Strawberries we have had an abundance of splendid fruit, such as I never remember seeing. We mulch early, the plants never once requiring water throughout the very dry season, but I attribute the extra heavy crop to the severe thinning the bloom got in 1894; as a consequence a light crop followed, therefore the plants were in better condition to perfect the super-abundant crop this season. Raspberries did not promise well at the beginning of the season, but since the rains later fruits have been much larger, if deficient in flavour. Red, Black, and White Currants have been abundant and very fine, and Gooseberries the best crop we have had for years. Plums on walls, Kirke's, Jefferson, Magnum Bonum, and Coe's Golden Drop are fully up to the average, likewise Victoria and Orleans as pyramids and standards and Farleigh Damsons as pyramids, root pruned, are bearing satisfactorily. Morello Cherries are very fine and Filberts are plentiful.

Vegetables of all sorts are good, but as a matter of course the dry season confirmed the superiority of deeply stirred land, more especially when manure is scarce. The only crops that I notice have suffered from the effects of the severe winter are the Globe Artichokes; these were severely injured and late in throwing up their flower stalks, but are now making up for lost time and producing fine succulent heads in abundance. Sage and Lavender have been badly cut, most of the plants having been killed.—W. LOW.

PUBLIC GARDENS.

CHELSEA BOTANIC GARDENS.

THE old Physic Garden at Chelsea is the oldest public botanic garden in or near London, having been formed in 1673 to 1786—or about forty years after Oxford, where a garden of the kind was established in 1632. The earliest botanic gardens in England appear to have been those of Gerard and Tradescant, so that here, as in so many other branches of human progress, it was individual genius and enterprise that led to public gardens of the kind, though even our early English pioneers in pharmaceutical botany may have got some of their inspiration from the earlier botanic gardens of Italy, such as Padua (1545) and Bologna, or those of Southern Europe, such as Montpellier (1558), Leyden (1577), Leipsic (1580), Paris (Jardin du Roy), (1596-1624), and the great university at Jena (1629). The celebrated old garden at Upsala, afterwards rendered famous by Linnæus and the Rudbecks, who issued thence their celebrated work (the "Campi Elysii"), only one perfect

copy of which is known to exist, at the Oxford Botanic Garden (Sherardian Library), though there is an imperfect copy in the Banksian books now at the British Museum. But few gardens, however, ever sprang into such sudden and well-merited importance as did that founded by the Society of Apothecaries at Chelsea in 1673, on land they had formerly acquired for their boat-house and the state barge of their company. Thus the great Evelyn writes in his well-known diary under date August 7, 1683, "I went to see Mr. Watts, keeper of the Apothecaries' Garden of Simples at Chelsea, where there is a collection of innumerable varieties of that sort particularly, besides many rare annuals, the tree bearing Jesuits' bark, which had done so much in quartian agues. What was very ingenious was the subterraneous heat, conveyed by a stove under the conservatory, all vaulted with brick, so as he has the doors and windows open in the hardest frosts, secluding only the snow."

There is a very interesting description of gardens near London that was sent to the Society of Antiquaries by the Rev. Dr. Hamilton, vice-president, and published in vol. xii. of the "Archæologia," which says: "Chelsea Physic Garden has great variety of plants both in and out of greenhouses. Their perennial green hedges and rows of different coloured herbs are very pretty, and so are the banks set with shades of herbs in the Irish stitchway."

What the shades of herbs set in the Irish stitchway may have been, I must confess I do not know, but the whole thing savours a little of bedding out, and may have been the thin end of the wedge in that direction. As I turned down Swan Walk the other day I did so with mingled feelings, for going to see an old garden is somewhat like going to see an old friend. Only one of the two old Cedars now remains, and that is on its last legs, so to speak, and it is now doubtful whether copious top-dressings and watering would do much to resuscitate its scathed old limbs and branches. The Salisburia adiantifolia has also suffered, one or two of its stems having been blown off during the past winter or spring. The Plane trees, Evergreen Oaks, and the Koelreuterias are healthy, and a fine old Mulberry was laden with its ripe and ripening harvest. The common Pomegranate is healthy here, but bore no flowers, and there is a plant of the rather uncommon Rhus juglandifolia near the quaint old entrance gate or "hole in the wall." It is possible that this plant is really the R. vernicifera, the Lacquer or Varnish Tree of Japan; at any rate I cannot find the name Rhus "juglandiæfolia" in any book on trees and shrubs I have now near me.

In one of the beds devoted to annuals I saw some nice tufts of Eschscholtzia tenuifolia, a dainty little Poppy-wort not often seen. Another rare plant of some economic importance has long been cultivated here, viz., Ferula persica, and I am glad to hear that the plant flowered during the present spring. It is a rare and handsome umbellifer, and one of the many sources of Persian asafœtida. The plant was formerly grown in the old College Botanic Gardens at Dublin, where it is supposed to have died after an attempt at division. All these gum-bearing umbellifers resent any interference whatever with their roots, and are best increased by seeds sown on a well-prepared spot whereon they are to grow permanently. Other plants here now seeding on strong, tall stems are Ferula glauca, and there is another fine species not named also seeding profusely near the large Wistaria.

Malabailia Opopanax, or Opopanax chironium, as it used to be called, is also seeding here, and it was to me really a treat to see so many choice medicinal umbelliferæ so luxuriant and fertile. This genus Malabailia is near Peucedanum, but has broader leaves, and the species named is figured in Sweet's "British Flower Garden," p. 288, though the figure gives but a feeble idea of the stately elegance of a well-grown specimen.

I was sorry to miss one or two old friends, and especially the spreading mass of the Gum Tragacanth that formerly graced the rockery stones brought from the Tower of London in 1772 by Mr. Alchorne, the honorary demonstrator, to which were added flints and chalk, given by Mr. John Chandler, and lava from a volcano in Iceland presented by Mr. Joseph Banks, for the purpose of raising an artificial rock, in order to cultivate those plants which require such a soil. This is one of the earliest records of the culture of rock-loving plants in a botanic garden known to me.

Perhaps no botanic garden can boast of effecting so much public good on such scanty means, and the galaxy of names that surround it like a golden halo is very remarkable. The whole history of the garden and those connected with it at one time or another is given in Field and Semple's "Memoirs of the Botanic Garden at Chelsea," published by Gilbert and Rivington, London, 1878, and from it I extract the following particulars:—

The garden having been formed in 1673, four Cedars were planted in 1683, this event forming quite an epoch in its history. One of these trees suffered from a gale in 1846, and four chairs were made of the wreckage for the use of the Hall. Piggott was the first curator, then Watts in 1680, Doody, 1706, about which time Sir Hans Sloane, the great and generous patron of the garden, and whose statue still stands in its midst, came upon the scene, Petiver in 1709, and Rand in 1724. The Sherards in 1732 both added to the credit of the place, and in 1730 the great gardener Phillip Miller became curator. He wrote his celebrated "Gardeners' Dictionary" here, the seventh edition of 1735 being his *magnum opus*, and as a lad he knew Ray, the botanist.

Linnæus visited the garden at Chelsea in 1736, and was more civilly treated here than at Oxford, where Dillenius alluded to him as "the young man who was confounding botany." But of Chelsea, Linnæus writes in his diary: "Miller, of Chelsea, permitted me to collect many plants in the gardens, and gave me several dried specimens collected in South America." Miller has the credit of being one of the first of English authors to embrace the then novel Linnean system of botanical arrangement, and Linnæus' visit to England effected a revolution in the then two great gardens, viz., Chelsea and Oxford. As a curious commentary on Linnæus' visit to Oxford, we may point out the fact that his system of arrangement as adopted soon after his visit to the Sherards has only been replaced by the natural system a few years, a fact much regretted by the antiquary and historian, however appreciable by the botanists of to-day.

Isaac Rand published his catalogue of plants grown in the garden in 1739, and then in connection with its best work come J. Miller, 1738, A. Forsyth, 1770 ("Forsythia"), Hudson ("Flora Anglica"), Alchorne, 1772, W. Curtis, originator of the *Botanical Magazine*, &c., and Sir Joseph Banks, who prided himself as having been a botanical pupil of the great Philip Miller In 1830 Wheeler, and in 1835 Burnett, were demonstrators, and D. Don was appointed examiner, and in 1846 Wm. Anderson, the curator, died, and was buried in a grave between the bodies of Sir Hans Sloane and Philip Miller.

In 1846 Robert Fortune was curator for a short period between his voyages to China, and after him came Thos. Moore. Nat. Ward here demonstrated the value of his closed or Wardian cases. Hooker, M. J. Berkeley, and J. G. Baker are other names that have added a latter-day lustre to what is even yet a most interesting and instructive garden.

The garden is about 3 acres in extent, and suffers from drought and a lack of the necessary labour and manure, but it nevertheless remains one of the focus spots of old Chelsea, and I trust that a spot so sacred to memories of the past may never fall into the hands of the speculative builder.

F. W. Burbidge.

Notes of the Week.

A seedling Passion Flower.—I send a bloom of a Passiflora raised here, a cross between P. Constance Elliot and, I believe, P. cœrulea maxima. You will perceive that the rays are of the faintest shade of blue. It is almost, if not quite, hardy.—J. M., *Charmouth, Dorset.*

Passiflora princeps.—I beg to enclose for your inspection three racemes of Passiflora princeps cut from a plant growing in a 12-inch pot. The plant has been in flower since February, and on it there are now seventy racemes as good as the enclosed.—A. G. Hookings, *Oldown House, Almondsbury.*

*** Remarkably fine racemes of this useful and showy climber.—Ed.

Fuchsia Riccartoni in the Shetland Isles.—When in the Orkney and Shetland Isles recently, the one redeeming feature of the barren, treeless country was F. Riccartoni, of which we saw many fine bushes, especially near Stromness, in Orkney. It is a pity that no attempt at gardening, even of the simplest kind, is, as a rule, made. True, the wind sweeps over the Isles with terrific force at times, but the air is mild, and in the more sheltered places the Fuchsia does as well as in Southern England or Ireland.

Victoria regia.—There is now to be seen in the Botanic Gardens, Regent's Park, one of the finest plants of the Victoria regia ever grown in this country. It covers a space of over 400 square feet, each of the eleven leaves measuring more than 7 feet across, apart from the turned up rims, which stand up 6 inches or 7 inches above the water, the deep pink of the under sides contrasting strongly with the vivid green of the upper surfaces of the leaves. The flowers, pink, and rising just over the centre of the plant, follow one another in quick succession.

Yucca guatemalensis.—This (one of the finest of all the Yuccas) was recently flowering in the Palm house here. Its height was about 23 feet, the upper half or flowering branch proceeding from a trunk, thickened below, to which the branches are cut back after flowering. The leaves spread to a width of about 6 feet, and the plant is altogether imposing. The terminal panicle is about 3 feet in height, somewhat spindle-shaped and dense with large white flowers. It is a native of Mexico and Guatemala, having been introduced about the middle of this century.—R. I. Lynch, *Cambridge.*

Flowers from Winchmore Hill.—I am sending you a few flowers which I thought perhaps you would like to see, and which are very fine here at present. Among them you will find the following: Double Polyanthus Curiosity, Lobelia Lord Ardilaun, Achillea Snowball, Achillea Little Gem (this only grows 5 inches high and is very free flowering), Aster amellus elegans, Haplocarpa Leichtlini, Centaurea ruthenica, Phygelius capensis, Haplocarpa scaposa, Hedysarum multijugum, white Lavender, and Anemone japonica Lord Ardilaun.—A. Perry.

*** A charming lot of well-grown things.—Ed.

Gerbera Jamesoni.—In spite of the last severe winter, two specimens against the wall of the stove have been extremely handsome all through the summer. The flowering season lasts about six months, but the number of flower-heads

open at one time varies from two or three in spring to about fifteen during the hottest weather. The flower-heads each measure about 4½ inches across and the colour has been compared to vermillion in powder. The mass of foliage is now about 2 feet high and the largest flower-scape is nearly 3 feet long. No protection is afforded in winter more than that of the glass above, which keeps off wet, but the assistance of four hot-water pipes behind the wall is no doubt considerable.—R. I. LYNCH, *Cambridge*.

A double Begonia.—I enclose a flower of a double Begonia, trusting it may reach you in good condition. Such a fragile flower may not stand a journey of almost 600 miles. I give measurements; circumference 10½ inches, depth 4 inches. I have no doubt larger flowers have been grown, but when dozens of plants can be raised from a 2s. 6d. packet of seed bearing quantities of such flowers, no one should be deterred from raising double Begonias. The soil I have found them do best in is three parts loam, one part leaf-mould and horse droppings, with a good dash of burnt refuse and fine charcoal. Large plants can be grown in 6-inch pots if the plants are occasionally given some good fertiliser.—T. SCOTT, *Ashford*.

The Japanese Wineberry.—My experience of this new fruit in a much colder part of the country than your Devonshire correspondent is as follows: At first I could not raise the plant from seed. An inquiry addressed to New York elicited that it was necessary for the seeds to be frozen, when they would vegetate readily. I put them out during the hard frost we had about three years ago. They were frozen hard for weeks, and on removal to the greenhouse vegetated at once. The plants were put out when large enough, and they stood the hard frost of last winter perfectly. Your correspondent exactly describes the fruit; the flavour is not unlike that of a Mulberry. I have tried it as jam and also in tarts, but in both I found that, like Raspberries, the fruit is better mixed with Red Currants; by itself it is somewhat mawkish. I find it does not like a dry soil (mine is dry), and although the plants bear well, they would evidently be much happier in a wet one. The treatment is the same as for Raspberries. The plants bear on last year's wood. I have no doubt the fruit is an acquisition, and, taken in hand and improved, will no doubt be of great value in the future.—NORTH COTSWOLD.

Amaryllis belladonna.—I send you herewith a flower-spike of a beautiful Amaryllis that I procured at the Cape of Good Hope some eight years ago. It seems to be similar to Amaryllis blanda, a coloured plate of which appears in Paxton's "Flower Garden." In colouring, in the shape and number of the flowers, and in height of stalk it differs from the ordinary A. belladonna, a spike of which I have enclosed for comparison. It will be seen that the bright pink veining which stains the upper half of the petal in the ordinary variety is almost entirely wanting, the only distinct colouring being a faint blush stain in the centre of the upper half of the petal. In shape the flowers more nearly approach those of the Crinums, with their trumpet-shaped blossoms, than the loose star-like open blooms of the typical A. belladonna, while the number of blooms on a scape averages fourteen, ranging from seventeen to twelve, an average, as far as my experience goes, but rarely reached by the garden variety. The flowers are also more distinctly drooping than are those of A. belladonna, and the stems sometimes reach a height of nearly 3 feet. It is undoubtedly closely allied to A. belladonna, but is, I think, more beautiful, and if but a chance variation, merits being increased. I received a few months ago over 100 bulblets from the region in which I procured my parent bulb, but shall be unable for two or three years at least to tell if any of them may be of the same strain.—S. W. F.

The weather in West Herts.—Another warm week, and the fifth in succession. The days were nearly all above the average in temperature, while the nights, on the other hand, proved cold for the time of year. On the warmest day the highest reading in the shade was 75°, whereas on the coldest night the exposed thermometer fell to 36°. Both at 2 feet and 1 foot deep the soil temperature now stands at 61°, or, at the latter depth, about 2° above the September average. No rain worth mentioning has now fallen for nearly a fortnight; the dews on several nights, however, have been unusually heavy. The four days ending the 16th were very calm; indeed, on two of them the average rate of movement of the air at 30 feet above the ground only amounted to about a mile an hour.—E. M., *Berkhamsted*.

A. F. BARRON.

TO THE EDITOR OF THE GARDEN.

SIR,—I enclose a copy of a letter which I have sent to Sir Trevor Lawrence as the President of the R.H.S.—Yours faithfully, A. H. SMEE.

The Grange, September 11, 1895.

My dear Sir Trevor,—I should be wanting in courtesy to yourself and other members of the council if I did not give you notice of the questions which I propose to ask at the next annual meeting of Fellows, or at such early period as the council may think it desirable to call the Fellows together for the special purpose of taking them into their confidence.

I shall require the production of the minutes of the council which appointed this special committee to report upon Chiswick, the date of its appointment, the names of the committee, the reference and the scope of its inquiry, the report it made, and all the correspondence emanating from the secretary or other officer relating thereto; also a statement of the proposed changes in the management of its Chiswick Garden. I shall also ask questions which will require the production of the minute book of the garden committee, and also the minutes of all the committees (fruit and floral) which visit Chiswick for the purpose of the seed trials, &c.

The logical outcome of the action of the council—if the rumours are true—in superseding the standing committees and appointing this special committee without consulting the Chiswick Garden Committee, implies a direct vote of censure on all members of these committees, and is equivalent to a vote of non-confidence in the competency of the garden committee.

The council must see that by the appointment of this special committee questions are raised which are far more reaching in their consequences than the consideration of the dismissal of an old employé. It is a public announcement by the council to the horticultural world that they have no confidence in the ability, skill, or integrity of the forty or more members composing their committees which visit the gardens at Chiswick, and this, too, at a time when others like myself are endeavouring to raise the standard of judging at local horticultural exhibitions, and to place the judging above the suspicion of local influence. The managers of these local shows have selected their judges from members of the fruit and floral committees, whom the council by its action have considered to be unworthy of confidence for consultation as to the management of its own garden. How will it be possible for the managers of local shows to continue to employ them for judges? What, too, is the position of these members, who are employed in giving technical instruction and acting as public examiners of candidates' papers on horticulture? To my mind their character is at stake, and some action must be taken in this matter where everything depends upon confidence. The council must at a public meeting justify their action or retract their proceedings; they must either rehabilitate the character of the members of these committees or reconstruct the committees. The sooner the matter is cleared up the better, for the uncertainty which overhangs the question is doing no good to horticulture. The least that can be the outcome of this unfortunate action of the council will be that its proceedings have been most unbusinesslike, and that they have unintentionally committed an uncourteous and stupid blunder.

P.S.—I have forwarded a copy of this letter to the horticultural press.

—— The official statements that have been made and the names of the special committee that advised the council in this unfortunate matter only leave matters worse. Everyone wants to know two things: the full text of the special report, and the character of the new policy which seemed to the council incompatible with the retention of Mr. Barron.—D. T. FISH.

Drying fruit.—There is now a great glut of Plums, Apples, and other fruit which literally do not pay the cost of gathering. It is continually asked why we do not dry them. Would some correspondent of THE GARDEN give some information how to set about it; the cost of the necessary apparatus, and where it can be got, regard being had to expense, which must not be too prohibitive for small growers?—NORTH COTSWOLD.

The Crystal Palace fruit show.—On Thursday, Friday, and Saturday, September 26, 27, and 28, the Royal Horticultural Society's great show of British fruit will be held at the Crystal Palace, and promises to be even a greater success than that held last year. The exhibition will be opened by the Lord Mayor, Sir Joseph Renals, at 12.30 on September 26, when he will be accompanied by the Sheriffs and the Master and Warden of the Worshipful Company of Gardeners. A public luncheon will be held the same day at 1.30 in the Grand Saloon, and will be presided over by Sir Trevor Lawrence, Bart. Lectures will be given each day of the show in the Garden Hall at 3.30 as follows: Sept. 26, "New Fruits of Recent Years," by Mr. G. Bunyard; Sept. 27, "Pruning Fruit Trees," by Mr. A. H. Pearson; Sept. 28, prize essay on "The Commercial Aspect of Hardy Fruit Growing." Nurserymen and others are particularly requested to exhibit under the schedule. By direction of the council, exhibits outside the schedule will only receive cards of commendation according to merit. Vegetables other than Tomatoes are not allowed to be shown. With reference to exhibits outside the schedule, exhibitors should bear in mind the new rule adopted at the suggestion of the fruit committee, viz.: All collections of fruit are limited to 100 dishes or baskets, and all dishes or baskets must be of distinct varieties of fruit, no duplicates being allowed.

Names of plants.—*G. H.*—Alyssum maritimum (dwarf var.).——*S. T. Srear.*—Inula pulicharia (Fleabane).—— *W. Michie.*—Yes; what is grown and used as Tarragon, but not the true Tarragon. Any nurseryman will be able to supply you with the true variety.——*G. Anderson.*—Cosmos bipinnatus albus. ——*M. T. Earle.*—The scarlet-berried Elder.——*L. Woodhouse.*—1, Clematis Jackmanni alba; 2, Clematis flammula. —— *Nurserymen.*—Conifers: 1, Biota orientalis Zuccarriniana; 2, Thuja occidentalis Dicksoni; 3, Retinospora obtusa var.; 4, Biota orientalis filiformis; 5, Biota orientalis var.; 6, Picea nigra Doumetii; 7, Juniperus virginiana; 8, Thuja plicata; 9, Picea pungens glauca; 10, Pinus Balfouriana; 11, Biota orientalis var.——*Isaac Turner.*—Probably Celastrus sp. and hardy.——*Anon.*—Picea orientalis.——*Z. Z.*—1, Polygonum cuspidatum; 2, Catalpa bignonioides; 3, Aristolochia Sipho.—— *S. H. G.*—1, next week; 2, common Polypody; 3, Nephrodium molle; 4, Asplenium viviparum; 5, Nepeta Mussini; 6, Agathæa cœlestis; 7, Fuchsia Mrs. Marshall; 8, Sedum sp.; 9, Rose Gloire de Rosomanes. ——*Geo. Anderson.*—Cosmos bipinnatus albus.—— *Hon. A. T.*—Eupatorium cannabinum (the Hemp Agrimony.

Names of fruit.—*J. R. N.*—Pear Fondante d'Automne.—*Miss George.*—Pears: 1, Williams' Bon Chrétien; 2, Emilie d'Heyst. Apples: 1, Mère de Ménage; 2, Hawthornden; 3, Cox's Orange; 4, Ribston; 5, not recognised; 6, Lord Derby.——*J. D.*—Pear Deux Sœurs. Apples: 1, York-hire Beauty; 2, King of the Pippins; 3, Golden Noble; 4, Lord Suffield.——*Seaton F. Taylor.*—Apples: 20, New Hawthornden; 15 and 25, Lord Suffield; 23, Dutch Mignonne; Pears: 28, Beurré Bosc; 19, Beurré Diel.

No. 1245. SATURDAY, September 28, 1895. Vol. XLVIII.

"This is an Art
Which does mend Nature: change it rather; but
THE ART ITSELF IS NATURE."—*Shakespeare.*

ORCHARD AND FRUIT GARDEN.

COMMON SWEETWATER GRAPE.

SINCE it has been possible to build vineries so cheaply, Grape culture against open walls has been largely discontinued; but the experience of 1893 and 1895 ought to have the effect of once more bringing into prominence the desirability of clothing sunny house fronts with Grape Vines. It is true many old Vines were badly crippled by the frosts of last winter, but in several instances summer neglect was largely responsible for the winter failure. When the lateral growth is allowed to grow at will, completely smothering the few bunches that show and the main rods generally, pruning—in this case another name for rough trimming—being deferred till late in the season, it is not to be expected that the Vines will be either perfectly hardy or productive. If the same pains were taken with outdoor Vines as are bestowed on those under glass, there would be fewer failures. I hold that the Grape Vine is most suitable for clothing sunny house fronts, more especially in the south of England, and certainly far preferable to either naked walls, badly mildewed Roses, rambling Roses that give but little flower and end up in breaking down wholesale, common Ivy and overgrown Virginian Creepers. During the summer a well-kept Vine proves distinctly ornamental, and in many instances would yield a heavy crop of very acceptable Grapes. The main rods ought to be trained about 3 feet apart, as it is a decided mistake to crowd them in any way. It is also unwise ts attempt the growth of extra long rods in one season, as these fail to ripen properly; whereas a length of 6 feet to 8 feet, duly stopped and lateral growth pinched back to the first joint, becomes moderately stout and strong, and ripens sufficiently well to both withstand frosts and produce bunches freely.

As far as my experience goes, it is the common Sweetwater that is the most reliable variety both as regards productiveness and ripening. It is also the least addicted to mildew. As a boy I well remember seeing grand crops of this Grape grown on south fronts of dwelling houses and high garden walls, and in those days tenpence per pound was the price obtained for them without very much difficulty. It is not the fault of our climate that we meet with so few examples of successful culture now-a-days, but rather, as before hinted, the faulty treatment given the Vines. Forty years ago Black Hamburgh would occasionally produce heavy crops of bunches, but the berries, though black, were never remarkable for their good quality any more than they were in 1893 or are likely to be this season. Then, as now, mildew was the cause of many failures with the Black Hamburgh, and it never was suited to open-air culture. Black Cluster or Black Burgundy is a sure cropper, but the bunches are small, dense, and the quality second rate. Early Ascot Frontignan and Early Summer Frontignan are also recommended for open-air culture, but of these I cannot speak from experience, and till I meet with something better shall go on recommending the common Sweetwater or Royal Muscadine, as more properly named. Not only is this the best in my estimation for open-air culture, but it also deserves a place in the amateur's vinery. No other variety succeeds so well against a back wall, and it is there where it should be grown. For the first two or three years the crops will be heavy and the bunches large, and in later years there will still be plenty of bunches, only, always provided sunshine is not wholly shut out from the Vines, they will be smaller. A narrow space between the laterals of the Vines on the roof will admit sufficient sunshine to those on the walls to ensure ripening of both wood and crops. So well does the common Sweetwater succeed under this treatment, that I have seen better crops of bunches ripening against vinery back walls than are had from the roof, the varieties in the latter case being Black Hamburgh and Foster's Seedling. It cannot be claimed for the common Sweetwater that it is richly flavoured, and as a matter of fact it is this very absence of richness that pleases invalids. It is a very refreshing Grape, and grown under glass is also fairly attractive in appearance, especially when lightly thinned. W. IGGULDEN.

A capricious Vine.—A peculiar freak has occurred on one of the Muscat Vines here. Three years ago a young rod was taken up on each side of one of the Vines (Muscat of Alexandria), and these have carried fruit for the first time this year. On the main rod and on one of the young rods the Grapes set well and are of the normal size and shape, but on the other young rod the bunches set badly, and only one really presentable bunch has been produced, this quite low down on the rod. The berries on this bunch and the few others which set on the other apologies for bunches are very large and round, having, in fact, all the characteristics of Cannon Hall Muscat, the stronger growth, form of leaf and general habit of growth aiding the deception. Had I not been certain to the contrary, I should have concluded that the Muscat of Alexandria had been worked on the Cannon Hall stock, but all the Vines in this house I planted myself and cut down to within a foot of the soil at the first pruning, while the point from which the young rod springs is about 6 feet from the border.—J. C. TALLACK, *Livermere Park.*

Canker in fruit trees.—It may interest those who are troubled with this disease in Apple trees to know the result of an experiment made last winter at Gunton with a view to its extermination. A row each of Lord Suffield and Potts' Seedling Apples in bush form were affected with this malady, so much so, indeed, that there was scarcely a clean branch visible in any one of the trees. Soluble paraffin was mixed with dry powdered clay and made of the consistency of paint, being afterwards well rubbed into the affected parts with a rough painter's brush. The result was that all the diseased portion healed up, and at the present time the trees present a very healthy appearance. No doubt canker is often encouraged by the roots being in an unsuitable medium, but some varieties are prone to canker in any soils and when well treated, hence the value of the above remedy.—J. C.

Early dessert Apples.—Apples are plentiful this season and, I notice in many places, smaller than usual on account of the heavy crop, and, of course, less valuable. Our best early dessert Apples this season are the older kinds, such as Irish Peach, Yellow Ingestre, and Devonshire Quarrenden, a good trio, but if I were obliged to select only one, I should give the preference to Quarrenden, as this may be had good much longer than the Irish Peach. The last-named (when stored early) soon shrivels, and is then almost valueless. The same remarks apply to most of the other very early kinds, as they are best gathered and eaten direct from the trees. Worcester Pearmain may be a good market fruit, but in my opinion, as regards flavour, it is only second rate, and should not be largely planted for home consumption. Mr. Gladstone, another very early fruit, has borne well this season, and is most valuable on account of its earliness, and if it had a brisker flavour it would be more appreciated; the flavour is better when the trees are grown in standard form. Duchess of Gloucester or Duchess' Favourite is not grown so much as it deserves. The fruit is of a glowing red and firmer texture than Worcester Pearmain and keeps longer. It is a prolific kind and does well grown as a standard. The newer Lady Sudeley, doubtless one of the handsomest early dessert Apples grown, cannot be termed of first-rate quality, it soon getting soft and flavourless when stored. Red Astrachan, a highly coloured fruit and very early, soon loses flavour when gathered. It cannot be termed profitable if grown in quantity in a private garden. Most of these early fruits lack good flavour, so need not be largely grown. Such old varieties as Irish Peach, Kerry Pippin, and Devonshire Quarrenden are difficult to beat when flavour is considered.—W. S.

Pear Glou Morceau.—This Pear is not always reliable, but this season any trees that I have seen are bearing freely; indeed, many are above the average. The same good qualities were noticed in 1893 when we had a hot, dry summer. Heat appears to suit this variety, as every kind of tree, whether on a wall, as a bush or a pyramid, is fruiting. The fruits this season are not so irregular in shape and the skin is much clearer. This is known as a December Pear, but from appearance I do not think the fruit will keep into December; indeed, many of the mid-season and later kinds will be much earlier, and I fear we shall not have many good Pears left for the new year.—G. WYTHES.

Peach Barrington on a west wall.—I have never seen any variety crop better than this on a west wall. The fruits are very fine, the colour all one could desire and the flavour splendid. This variety is not subject to mildew and the trees rarely fail to fruit. I am aware it is not considered by some equal in flavour to Noblesse, but I fail to see any objection on that score. Being somewhat late, the fruit is valuable on that account, as it ripens at a season when Peaches are none too plentiful. Two seasons ago, seeing how well this variety did in a poor soil, I planted it largely, and it has given fine crops. It deserves room in all gardens where late Peaches are required.—S. H.

OUTDOOR FIGS.

SEVERAL correspondents have recently been writing of outdoor Figs, and I have been appealed to to say how it fared with them last February and since. The answer is not very encouraging. It must be admitted that the severe frosts inflicted serious injury on many outdoor Figs in East Anglia and elsewhere. From what I have seen and heard there is comparatively little difference between the protected and unprotected Fig trees. This seems rather paradoxical at first sight, but on reflection and inquiry, the injury to protected Figs to the same or a lower level than to the unprotected is only what might be expected, for the following reasons: First, open-air Figs are seldom sufficiently protected to shut out anything like 30° or more of frost. Secondly, were such excessive protection given, it would so greatly weaken the trees that a less degree of frost would do them far more injury than a greater amount of cold would do the harder unprotected trees. And finally, the greatest injuries inflicted on open-air Figs do not arise from actual freezing in winter, but through chills and changes of temperature in the spring. It was through a careful study for years of these facts on walls and buildings that I determined to abolish any and all protection to outdoor Figs, and I have had some fine crops on roofs as well as walls and buildings without any protection whatever. Mr. Crawford asks about the East Anglian Figs this summer. Those trees and portions of trees that escaped the killing frosts have ripened, or are ripening

some good crops, but numbers of trees have been cruelly mangled, and coddled and pampered trees have been cut down to the ground. I saw a fine wall in a large garden last week every tree on which had to start afresh from the base. I cannot help thinking that not only is protection to outdoor Figs a mistake, but that the summer pruning advocated by Mr. Crawford and "W. G. C.," and no doubt practised by many others, is a more serious mistake still, for what do such operations effect for the Fig? Thinning the shoots or wood is said to ripen it. But does it? I boldly say, no. Whatever may be true of the wood of other fruit trees, the thinning of Fig shoots concentrates the vital force meant for the whole into fewer or less shoots. By thus concentrating growing force the strength of the shoots is increased. The stronger the Fig shoots the longer they will and do grow and the later will the wood be in ripening; therefore, the thinning of Fig shoots, so far as it concentrates strength, hinders and cannot foster early and thorough maturity of wood.

The single, double or multiple stopping of Fig shoots in the open air is still more mischievous and antagonistic to the perfect maturity of Fig wood. Through hard treatment at the root and full exposure of the tops we may so crib, cabin and confine growth as to force maturity of fruit and wood within the narrow compass of a season's growth in the open air. But attempt to ripen two or more growths of the Fig in the open air and failure is inevitable. The climate and the semi-tropical character of the Fig forbid the accomplishment of such impossibilities. Under glass with temperature under complete control your correspondents may thin and stop their Fig shoots as they list and gather Figs almost all the year round if so disposed. But there is, so far as I have discovered, only one tolerably sure and certain mode to an annual crop of good Figs out of doors, and that is through a starving *régimen* at the roots and leaving the tops severely alone, only helping them up and over larger, higher, and yet wider areas. Many of the finest trees I have seen throughout East Anglia have been thus roughly treated and they have yielded bushels of Figs for years. Nothwithstanding the many additions of late years to our varieties of Figs, I know of none to compare with the old Brunswick and the Brown Turkey for thus roughing it over gable ends, garden walls, or over the roofs of stables, cow sheds and other buildings. In my first situation in East Anglia I was compelled to grow Figs in the open air. I planted in ordinary borders and grew fishing rods. I lifted the rods, cleared out their root-runs, rammed in instead a yard deep of lime rubbish, brickbats, road sand and loam, in which I planted the Figs and they fruited for years. D. T. F.

Early decay of fruit.—Have growers who have many varieties of Apples and Pears noticed that this season the nearly ripe fruits of various Pears, especially the large kinds, are decaying badly on the trees and dropping prematurely, many of the fruits being lost? The worst Pears are Pitmaston Duchess, Marie Louise, Beurré Bachelier, and other varieties with a soft skin. Large Apples, such as the Codlins and early varieties, have been bad in this respect, many of the large fruits decaying before the skin changes colour. If this decay is likely to continue when the fruits are stored, I fear there will be heavy losses, as it is the largest fruits which suffer. I am inclined to think the weather of late answerable, as upon close examination the fruits are not injured by birds, but decay commences at the stalk. This may be owing to the fruits being over-charged with moisture, as the trees suffered from drought early in the summer, whereas now there have been heavy rains. W. S.

Plum Belle de Septembre.—This is, I consider, one of the very best late Plums grown. I am aware it is not the latest, as there are several others, such as Wyedale, which hangs till November, and Monarch, a very fine late variety. Belle de Septembre is distinct from those named, being sweeter and a very fine fruit for tarts and preserving when the season is nearly over. It is not always a sure cropper in rich soils, growing very strongly, but I get good crops from standard trees by root-pruning and thinning out useless wood. My trees on a north border never fail to fruit freely. The fruits are large, roundish, skin reddish purple, with a nice bloom, flesh yellow, juicy, sweet, and refreshing. The fruit will hang well into October, and those who may not require to grow it in standard form will find it a profitable variety, given bush culture, if the knife is not used too severely and there is room for the trees to grow freely.—G. W. S.

Apples in East Anglia.—The Apple crop generally on ordinary orchard trees in Norfolk is a very poor one, owing to the desolating wind which swept over the county about the middle of May just when the trees were in full flower. Some of the earlier varieties were sufficiently advanced to stand the shock and are bearing fair crops. In several gardens which I visited there is abundance of average-sized fruit on espalier and bush trees, these being lower and more sheltered than the standards. The disastrous effects of these gales ought to teach us the need for ample shelter, a point which even now-a-days is frequently overlooked in the formation of new orchards. As a further proof that the failure of the crop was due to the cutting wind, I may mention that in some instances a partial crop of fruit may be found on the side of the tree opposite to that from which the storm raged.—J. C.

INFLUENCE OF SEASONS ON FRUIT.

It will be remembered that during the hot summer of 1893 both Pears and Apples grew to an enormous size. In this district many fruits of the former of such varieties as Glou Morceau, Beurré Diel, Van Mons Leon Leclerc, Gansel's Bergamot, and others weighed considerably over a pound each, while some of the larger kinds of Apples, like Warner's King, Peasgood's Nonsuch, Ecklinville, and Loddington were over 20 ozs. Now the rainfall in this part of the country between March 1 and June 22 in 1893 was only a little over an inch, while during the same period of the present year it exceeded 4¾ inches. In 1893, between June 22 and September 1, there was a trifle over 5½ inches of rainfall, and between these latter dates of the present year there has been a fall of 6¼ inches. By this it will be seen we have had about 4½ inches more of rain between March 1 and September 1 this year than we had in 1893, yet with us the fruit is not nearly so large this season as it was then. How is this great difference to be accounted for? As will be seen from the above, there has during the last three months of the present year been about three-quarters of an inch more rainfall than there was during the same period two years ago. In June, 1893, there was 1·36 inches of rain, while in the same month of the present year there was only ·36 inch. In July of both seasons the difference is so slight as to scarcely be worth notice, there being just a trifle over 3·50 inches in both instances. In August, however, of the two years we find a great difference, for during that month in 1893 there was only ·73 of an inch, while in the present year there have fallen 2·42 inches. It would appear from this that the rain which fell in June, 1893, was far more beneficial to the fruit crop than that of August, as it kept the sap flowing freely, inducing the fruit to swell, and instead of remaining for some time at a standstill, as was the case this season, it grew away rapidly from the first. From this we may learn a lesson with regard to watering, as it will be seen by the above that in order to have the largest fruit the trees must be attended to while the fruit is small and the wood sappy, for if neglected at such a time it will be difficult to make up for the loss afterwards, even though the trees are mulched and fed. We have of late experienced some very bright sunshine, such in fact as is seldom known in this country so late in the season. With us an ordinary thermometer suspended to a post in the centre of the garden for three days in succession registered 111°, 103°, and 109°, while in the shade the temperature on the same days was 86°, 81°, and 82°. The bright sunshine has had a serious effect on many kinds of early Apples that were fully exposed and approaching maturity. Some varieties, such as The Queen, Peasgood's Nonsuch, Cox's Pomona, Warner's King, Pott's Seedling, Loddington, and others of a like nature, were so scalded by the action of the sun as to turn brown and become quite soft before evening. I have never seen anything like this before, and shall be curious to know if anyone else has experienced the same thing. Our soil is a poor, stiff loam resting on rock, and though very retentive, it does not seem to have held sufficient moisture to supply the fruit during such weather, though the trees do not seem to have been affected in the least, as the foliage is quite green and healthy. Pears have not grown so well with us as they did in 1893, though some kinds, like Huyshe's Victoria, Fondante d'Automne, Passe Colmar, and Winter Nelis, are far better this year than they were two seasons ago. It seems a great pity that most of our best Pears are fast going out of cultivation, and this on account of large worthless varieties taking their place. It is a pity that such delicious kinds as Seckle, Comte de Lamy, Ne Plus Meuris, Winter Nelis, Jean de Witte, Zephirin Gregoire, Thompson's, Dana's Hovey, Beurré Superfin, Doyenné Defays, Aston Town, and others that do not find favour with judges on the exhibition table do not receive more attention. If Pears are only to be grown for exhibition, then the sooner fruit shows are put an end to, the better will it be both for the gardener and his employer. I wonder how many fruit judges of the present day know what a good Pear really is, or the value of first-class flavoured sorts. Until competent judges are engaged at our large shows or some standard is given for them to work upon the same thing will go on, prizes being awarded for varieties with no better flavour than Turnips, while those which are really first-class are passed over. It is quite time that gardeners protested against this kind of thing and have fruit judged on its merits, otherwise it is useless to grow fruit of good quality.

H. C. Prinsep.

Slugworm on Pear trees.—This pest is more troublesome in many parts of the country this season than usual. I have seen many fine healthy Pear trees almost divested of foliage by its ravages. The great difficulty is reaching them when in the minute caterpillar state, as these are located between the leaves, the latter being quite sealed together by the web. One old fruit grower much troubled with this pest recently told me that when the slug state is reached he soon clears his trees of it by an application of lime and fine sand. The former must be fresh slaked and the two mixed in the proportion of one of lime to two of sand, and dusted freely over the trees at eventide.—J. C.

Red spider on Vines.—This insidious pest is doubtless the greatest curse the Grape grower has to deal with, and, unless duly checked, terribly speedy in its work of destruction. During the past few summers gardeners who formerly were able to keep it under by fumes arising from

sulphur-coated hot-water pipes have been beaten in their attempts, so persistent have been its attacks, especially in exposed situations and on light well-drained soils. Several noted growers and exhibitors have now taken to what was at one time considered a barbarous practice, viz., peeling off the greater portion of the bark and afterwards well dressing the rods with some insecticide, believing that applying the dressing over the old rough bark was useless, the insects being secreted underneath and out of its reach. Since practising this their Vines have suffered very little from red spider. Mr. Allan, of Gunton, now adopts this plan, using soluble paraffin and clay. The latter is first dried, then powdered and moistened with pure soft water, being afterwards rendered of the consistency of paint by the addition of the paraffin; by this means an overdose of paraffin is avoided. This applied with a painter's brush after peeling keeps the Vines clean throughout the season. Mr. Allan does not think the rough bark so necessary as a protection against sun heat as some people imagine, the foliage of healthy Vines duly protecting the rods. The healthy condition of the Vines at Gunton convinces me of the soundness of the remedy, especially after a dry season like the present, and I intend trying it myself next winter. —J. Crawford.

Apple Nanny.—How seldom this Apple is met with in private gardens, yet it is really a first-rate variety, coming into use at the end of September when dessert varieties are scarce. About Havant, and just within the borders of Sussex, this Apple is largely grown. It is a tremendous cropper, the fruit of medium size, greenish yellow, with broken streaks of red on the shaded side, and of a brighter red on the sunny side, streaked with dark crimson. When in condition it is of excellent flavour, but does not long remain so.—E. M.

FRUIT NOTES FROM BUSHILL PARK NURSERIES.

Gardeners who may happen to be in the neighbourhood of Enfield should, if possible, visit the above nurseries. Pot Vines are grown by the thousand, and Messrs. Low appear to be alive to the fact that planters now-a-days refuse to purchase Vines that have been plunged in bottom-heat. At Bushill the pots are stood on a hard bottom of ashes on each side of long span-roofed houses, ample room being left for the ingress of light and air. A splendid lot of Muscats, as well as ordinary varieties, with strong short jointed canes may be seen, the pots being filled with hard wiry roots that will stand exposure in autumn and winter far better than those grown in hotbeds of tan or leaves. I noticed a batch of canes in 6-inch pots intended for cutting back and growing into fruiting rods next summer. I learnt that some growers prefer these to larger ones for planting in permanent borders. A special feature of this nursery is the Peach and Nectarine trees grown and fruited in pots under glass, this being done in order that planters may have an opportunity of seeing and even tasting the various varieties. Old standard sorts of Peaches, such as Royal George, Stirling Castle, Gros Mignonne, and Bellegarde were represented by healthy specimens carrying fine crops of good-sized highly-coloured fruit. Old Elruge, Stanswick Elruge, Rivers' Orange, Humboldt, about the best of the yellow fleshed section, and Lord Napier were most conspicuous amongst Nectarines, the bright perfectly-finished fruit of the last strengthening my opinion that this fine-flavoured Nectarine is less liable to sunstroke and shrivelling grown in pots and partially shaded by the foliage than on trees trained close to the glass. Chaucer, a variety I never heard of before, appears to be a splendid Nectarine; in fact, so far as size and colour go, I have never seen its equal. The stock of trained Peaches, Nectarines, and Apricots in the open ground is a sight worth seeing. Many hundreds of absolutely faultless trees might be picked out, and in proof that the knife has been judiciously used, I may mention that the lower branches are as strong, and in some instances even stronger, than the more upright and central ones, which is unfortunately seldom the case in nursery trained trees. The wood of these, although strong, is wonderfully short-jointed, and such as with a fair autumn will ripen well before the lifting time arrives. The same faultless condition is observable in the extensive breadths of Apples, Pears, and Plums; no overgrown specimens are visible, the annual demand being so great that a clearance is always effected. Space will not permit of speaking in detail of the many thousands of forcing subjects grown in pots and of the almost unparalleled quantities of Roses, all in perfect health.

J. C.

NOTES ON APRICOTS.

Mr. Crook (p. 193) gives us some interesting notes anent the growing of Apricots. Whether trees require so much water generally is open to question, as one cannot lay down a universal rule guiding this detail of culture. The whole question of supplying the trees with water hinges of course upon the soil of each locality. While a light sandy soil would not grow this fruit at all without the aid of water in abundance, that which is just the opposite in character would require treating otherwise. The late Mr. Wildsmith grew Apricots in quantity at Heckfield, and in doing so he relied much upon a free water supply, not only during the time the fruit was upon the trees, but after it was gathered he used to thoroughly soak the soil next to the wall several times. Now at Wilton Park Mr. Challis grows equally good Apricots upon trees facing the south; he does not depend so much upon the moisture artificially supplied, but rather the reverse. The roots are mainly confined to a border 3 feet wide, the remainder in front being cropped with small-growing vegetables and salads. By trenching the part devoted to vegetables every year, the annual root-pruning the trees receive induces them to make a mass of fibrous roots, which are a great benefit to the trees. Mr. Challis believes in having the surface quite loose to guard against evaporation of moisture from the soil. To assure this, he occasionally forks over the surface 2 inches or 3 inches deep, and adds to it occasionally a top-dressing of burnt earth and old lime rubble. This not only acts as a mulch, but provides the roots with the necessary nutriment required by stone fruit. Natural circumstances as to soil and situation must be taken into consideration before adopting any hard and fast rule. I know an Apricot tree which is over two hundred years old. Within about 60 feet of the tree is a large pond, and no doubt the roots of the Apricot are at the edge of the pond, thus deriving considerable aid from the moisture obtained there.

E. M.

Melon Golden Perfection.—I also have a good word to say for this Melon. I have grown it for the last twenty years until the last two seasons, when it got crowded out by so many newer sorts that one was anxious to give a trial to. Golden Perfection is a splendid Melon in every respect as regards freedom in setting and swelling its fruit to a good size and flavour. Rather a longer period is required to ripen its fruit than with many other sorts, which is a point in its favour rather than the reverse, because where several varieties are grown in one house or frame a longer continuance of ripe fruit is the result.—E. M.

Apple Cox's Orange Pippin.—I am surprised to hear that this Apple does not succeed at Claremont. It grows wonderfully well here, bearing very heavily most years. One tree—a rather low-grown standard—is really a sight at the present time. This Apple requires very little pruning indeed beyond thinning the shoots to enable the wood to get ripened. Shoots of the current season's growth 18 inches or more long will produce fruit in 1897 in the usual course of events. There are far too much pruning and spurring in of the young wood of many sorts of Apple trees to obtain the best results.—E. M.

Apple Keswick Codlin.—What a pity this Apple is not more favourably looked upon by market men. In some towns they will not have it at any price. The objection to the old Keswick is, that the fruit being so soft, it will not bear handling as often as is required in a retail trade. No Apple has a better appearance on the tree when it is thoroughly ripe, and as to its cropping qualities, they cannot be excelled; no housewife would wish for a better Apple for cooking, I am sure. For private gardens I always advise that a tree or two of this Apple be planted to come in as second early. It should not be closely pruned. Treated more on the extension system it fruits abundantly, and the branches should be well thinned out.—E. M.

Kitchen Garden.

BEET AND CARROT CROPS.

Good breadths of Beet are few and far between. Much of the seed sown failed to germinate till the rains came, or if it did, the plants only existed, as it is very certain very little was seen of them much before August. Where the hoe was not run through the beds and a fresh start made the crops in most instances are very irregular. A portion of the plants or those that came up early and kept growing have developed into monstrosities, or something between a Beet and a Mangold, while the rest are too small to be of much value for cooking. Some growers blame the seedsmen, or rather the strains of seed supplied them, for this breakdown, and if there were only a few isolated instances they might have good grounds for blaming them. As it happens, the same state of affairs prevails in large and small private gardens, in market gardens, cottage gardens, and allotments, and all could not have been supplied with much mixed or badly saved seed. I think we must credit the season of 1895 with the extraordinary behaviour of Beet. The tropical heat of the early part of the summer, followed by soaking rains and then more strong heat, simply made the Beet grow out of all character. Turnip-rooted forms were the first to show signs of becoming far too coarse, and at the present time very few indeed of these roots are fit for use. Those transplanted, however, did not behave quite so badly, and some of these are now no larger than tennis balls. In the Dell's Crimson type we have one noteworthy exception to the rule as far as coarseness is concerned, but, unfortunately, want of robustness in this instance proved somewhat of a drawback, and I have seen beds of it in which a fortnight ago there was scarcely a root large enough for cooking. This class of Beet always pays for rather high culture, that is to say, should have ground only partially exhausted of manure applied for preceding crop, or else a dressing of manure should be dug in deeply by way of preventive of forked roots. Soils not naturally free working ought always to be dug, and in some cases re-dug, long enough in advance of sowing to admit of these breaking down finely, and moderately early sowing, timely thinning out, and a free use of the hoe between the rows ought to do the rest. Beet is an important crop, and should not be relegated to any breadth of ground that happens to be vacant at the time seed must be sown. With only extra large and very small roots to depend upon the question is, what can be done to meet the inevitable demand for Beet? Personally I shall not be in a hurry to hand the coarse roots over to cows or pigs. Some of them are of a

better colour throughout than might be expected, and the attempt should be made to properly cook these, say, after the smaller roots, and which will soon become still smaller unless left in the ground and protected, are used up. If cooked for about four hours they ought to be well softened throughout, and if the colour and flavour are good, they might be cut transversely and then stamped into circles or diamond-shaped pieces. The small roots, if lifted, should be packed in moist sand, but would keep better and probably improve in size if left where they are, protecting from severe frosts directly these are imminent. They may be banked heavily with either ashes, fine soil or leaves.

CARROTS.

are sufficiently plentiful and coarse enough to please all who place weight before quality. Strains have been improved in the wrong direction. What a few years ago would have been considered perfect would now be thought too small—at any rate, from an exhibitor's point of view—and a cross between an Intermediate and Long Surrey, that is to say, an overgrown Intermediate, is the result. Sow these large-growing varieties early in April and the chances are there will be found when lifting a great percentage of cracked or split roots and the rest be too large for cooking whole. Every cook and every gardener ought to be well aware that if a Carrot is sliced up prior to being boiled the flavour is spoilt. Too often these mutilated roots are only half cooked, so that they come to the table both hard and tasteless. A Carrot should be boiled whole, and long enough to become quite soft throughout, quartering it if need be after cooking has taken place. If one hour's gentle boiling is not enough, then extend the time another half hour or longer. More often than not half an hour is the time allowed for cooking or rather spoiling Carrots. Gardeners are quite as much to blame as cooks. Instead of having great coarse roots for the table they ought to send in small and comparatively young roots, the larger ones answering well enough for flavouring. Either sow later and thin lightly, or else depend largely upon the stump-rooted forms, Nantes Horn being one of the best for the purpose. It is astonishing what a number of small roots suitable for cooking whole can be had from a row or rows of any variety of Carrot either very lightly thinned or not thinned at all. This has been the experience in many gardens, but in how many instances has it been profited by? There should be several rows only very lightly thinned, the most serviceable roots being those that actually press against each other. Sowing in June and July is also desirable as a means of keeping up a supply of tender young roots. None of these undersized roots should be drawn and stored, unless in anticipation of an extra severe frost, this rendering the ground too hard for drawing, as they keep better, are sweeter and more tender when drawn direct from the open ground. Mulch with strawy litter. W. IGGULDEN.

Large Onions.—I note most of the prizes at the late show at Chiswick were awarded to huge bulbs with modern names, the older kinds not having the least chance, though I know well which would be the best in five or six months' time, a season when Onions are valuable. I am not finding fault with what may be termed well-grown bulbs, as these are good for serving whole, but with the large Onions which take more than a season to grow. I do think in judging the quality of any vegetable mere size should not be considered. We do not want Onions over 1 lb. in weight or that take nearly twelve months to grow. For show they make their mark, but for use they are nowhere. I also noticed some of the bulbs looked as if they had been grown in more favourable climates. Although glass is now at most large growers' command, I do think it can be made more useful than for the production of these giant roots that will not keep, and which are certainly not profitable. Judges at shows would not award prizes to many vegetables which only had coarseness to recommend them, and why should this increased size in Onions be encouraged? Why not make a stand at a certain size and encourage good culture, but not that which does not add to quality? I regret to say we are losing sight of one of the chief points—quality, as it will be found after a certain size is obtained there are deterioration and loss. I was in hopes that at Chiswick this point, namely, size before quality, would be considered. This was a simple matter in the single dish class, but more difficult with collections, as, placing the Onions on one side, there was fine quality in a large number of the exhibits. In most of the collections I was glad to see that mere size was a secondary consideration.—CRITIC.

Pea Holloway Rival.—Though not one of the new kinds of garden Peas, this should not be overlooked by those who appreciate a sweet-flavoured, large-sized Pea, for I doubt if there are many to excel it in these points together with the vigorous habit and dwarf growth in the haulm. It is good as a midseason kind, but is even better, I believe, as a late sort, and for late gathering, I purpose growing it more largely another season. In a raw state it has been the sweetest Pea I have tasted this year, and though not one of the large exhibition kinds, its yield is better than many of them, the Peas being extra large and the pods filled to the extreme end.—W. S.

Tomatoes at Warley Place.—One of the grandest crops of Tomatoes I have seen for many years is growing on a west wall in the new kitchen garden at Warley Place, Essex. The variety is Reading Perfection, and many of the finest fruit would each, I am sure, weigh close on a pound. It was not, however, the size of the individual fruit that struck me so much as the heavy and even crop. Quantities have already been gathered, and there still remain innumerable clusters both in a ripening and semi-green condition. The soil is quite newly turned up, and although not over-rich, apparently just suits the Tomato. The plants were raised early and planted out in good time, which cannot always be done in gardens lacking shelter, which is one of the points in favour of the new kitchen garden at Warley Place.—J. C.

Cabbage Sutton's Little Gem.—I have this season grown the above for the first time and am much pleased with it. It may be termed a summer Ellam's, which is, I consider, the best early spring variety, Little Gem being invaluable for summer cutting. For the supply from July to September it is excellent, and without the strong flavour summer Cabbages usually possess. Little Gem is well named, it being a small variety with very compact habit, having few outer leaves. The hearts are inclined to be cone-shaped, and remain good for some time. If sown in April and again in June there will be a long supply of delicate little Cabbages at a season this vegetable is not always good. I have not tried this for early spring cutting. For market it may be considered too small, but for private gardens it is a great gain, as it can be grown in a limited space and soon turns in.—G. WYTHES.

Good winter Cabbages.—The Coleworts are mostly grown for early winter supplies, but they are most valuable at the end of the year. From January to March there is room for good Cabbages (varieties that will stand a certain amount of severe weather and which do not split). So far with me none have proved better than St. John's Day and Christmas Drumhead. The former is a choice Cabbage and of the most delicate flavour possible. The plant is of compact growth, taking up little space. The hearts have a flattened or Drumhead shape, but the variety is quite distinct from the ordinary Drumhead type, being smaller, of a darker green colour, and more delicate flavour. This variety was on trial this season at Chiswick and was given an award of merit. Another, but larger Cabbage well adapted for winter is Christmas Drumhead. This, like St. John's Day, is a very dark-leaved variety, solid, and similar in quality to the above. Those who grow either of the above would prefer them to other vegetables of a stronger nature. There are other advantages. Frost does not injure them, caterpillars rarely infest them, and they can be grown in a limited space. I think them more valuable than Savoys. To get a supply for the first three months of the year I sow in June and July. In cold, late districts it may be necessary to sow in May, and one sowing will suffice. The St. John's Day I sow early in July, having a liking for the small compact heads, large Cabbages not being required. Plant in rows 2 feet apart, the plants being 18 inches apart in the row. Grown thus they follow the Coleworts, and there is no break in the supply of good Cabbages from January to December.—G. WYTHES.

Potato Windsor Castle.—In the spring of this year I obtained a peck of seed of this Potato. Wishing to see what I could produce from this, this, I had the tubers cut, placing them in boxes in leaf-soil and standing them in a warm house. When they had rooted out into the boxes, I had them planted with a trowel on some land that had not been dug for more than fifteen months. The season previously it had been cropped with early Potatoes and Brussels Sprouts. Just before the Potatoes were planted I removed the stumps and hoed and cleaned the ground. The crop is a splendid one, there being 3¼ cwts. of Potatoes. Another recommendation to this Potato is that it ripens off early. At the present time (end of September) I have a splendid crop of green stuff on the ground. —J. CROOK.

Tomato Duke of York.—This new Tomato will, I think, in a short time be as popular as the well-known Perfection. It sets as freely as one could wish in a moist temperature or in dull weather. Some seeds sent me late this spring have produced very fine plants with a great weight of fruit, and, though late, will be most serviceable, the fruit being of a uniform size. Earlier plants planted out of doors in June are now giving a heavy crop of ripe fruit. Another good point is the habit of the plants. They do not produce such long joints as some of the older kinds and there is less cutting back. It is the heaviest cropper I have grown, and I intend to grow it largely next season. When overfed, it, like most other kinds, produces large fruit, but when well managed I have found it one of the best as regards good shape and size of fruit. —G. WYTHES.

Celery.—The Celery crop looks very well indeed this year, but the very fine weather and long-continued drought will probably affect it badly unless extra trouble is taken to water it well before earthing up too much. Even with a change to wet weather too much dependence must not be placed on the rains being sufficient for its needs, and water should be given freely if good quality is desired. The advocates of early earthing are not so numerous as they were some years ago, and this is for the best, as once we get the soil high enough to form a ridge, there is no further chance of effective watering. A little soil put to the plants when they begin to spread is a good thing, but after that the best practice is to add no more until six weeks or so before wanted for use, as this gives plenty of time for blanching. Later on, say from the middle to the end of October, earthing up of the main crop may be pushed forward in good earnest, especially if a large quantity is grown, as we must then take all the advantage of suitable weather; but with small quantities grown for private supply only I would advise leaving the work as late as is consistent with the requirements, being quite convinced that late earthing conduces to hardiness, the hearts resisting hard frost all the better for not having been too long in a blanched state.—J. C. TALLACK.

Trees and Shrubs.

CEDARS OF LEBANON AT HOME.

We publish this week a carefully done engraving of one of many photographs taken by M. Maurice de Vilmorin this year, when we also had the pleasure of seeing these trees on a mountain in Algeria—Mount Babor—about the time when the Hawthorn opens on the mountains in North Africa as well as in our English hedgerows, and with the snow still in wide wreaths in the hollows of the higher parts of the mountain. A description of the visit, however, has been already published on page 443 of The Garden for June 22, 1895. To this we beg to refer any reader interested in this noble tree as it grows in a wild state.



Cedars of Lebanon in North Africa (Mount Babor, Algeria). Engraved from a photograph by M. Maurice L. de Vilmorin, May 3, 1895.

WISTARIA SINENSIS.

"F. W. B." (p. 157) refers to the frequent use of Wistarias as crowning ornaments to walls in France. They are also all too seldom used for such purposes in this country. Few things in gardens are more beautiful or satisfying than walls of Peaches, Pears, Figs, and Tea Roses crowned with a canopy of Wistaria sinensis in flower or foliage. Fortunately, the leaves and branchlets are unique in form, colour, and cleanliness. I cannot remember a case of insects on the Wistaria in the open air. The leaves, flowers, and young shoots on healthy plants are also ample for protective purposes, and their character adds greatly to their force and efficiency as protectors against cold on the bare face of walls on still, frosty nights. Thus for a living coping we have few plants that can equal the Wistaria, while none can possibly excel it in beauty.

I am surprised that more is not made of the autumnal blooming of Wistaria sinensis. True, there is not the same quantity of bloom as at the first flowering. If this has a fault, it lies in the direction of excess, as I have often felt in the presence of magnificent specimens clothing areas of from 200 to 400 square feet we cannot see the beauty of the flowers, nor mark their perfect harmony with the foliage because of their sheer massiveness; hence the more sparse harvest of beauty spread over August and September is thus more welcome and graceful. Seldom has the autumnal harvest of beauty been richer and more plentiful than this year. It is quite true, as noted by "F. W. B.," that the Wistaria is slow in starting. But against this should be placed to its credit that once it does start, no harsh or cruel treatment nor the hardest starvation treatment can prevent it blooming in spring and autumn. Much of the stubbornness at starting arises from the hard *régimen* adopted in a young state. Beautiful as the Wistarias are and deserving of a place in every garden and on every house, how rare is it to find masses of young plants in robust health in even our best nurseries. Instead of this, a few small plants in pots, with a starved look and in stunted condition, represent the entire stock of this matchless climber. More than most plants, perhaps, when Wistarias get into a low way, they are a long time getting out of it; and hence mainly the slowness of this start.

There is another reason for slow growth at first. Any soil or culture, or rather no culture, is considered good enough for Wistarias. But for vigorous shoots of 10-feet, 20-feet, or 30-feet run to be quickly wreathed with blossom, and continue in health and beauty for a lifetime, the Wistaria prefers a yard deep of light rich loam resting on a dry base, enriched with well-rotted manure or leaf mould, and drenched with sewage or house slops in dry weather.

Of course I shall be told that not a few of the finest specimens of Wistarias that have flowered the most and run the furthest have never had any culture or manure. I know it, and yet who shall say what their deep-boring, far-reaching roots find for themselves. D. T. F.

Chrysanthemums.

CHRYSANTHEMUM NOTES.

At the first sign of colour in the buds it is wise to place the plants under cover, or the bad effects of the open air will be noticeable in damaged florets. On the other hand, it is not a good plan to begin housing Chrysanthemums for any other reasons except the above and protection from frosts. I have sometimes put backward sorts under glass for the purpose of hastening their blossoms. This, I am satisfied, it does not do until after a certain period. The night dews and the generally moist atmosphere of the month of September are most conducive to bud-swelling, and there is no means under glass of providing this natural state of things. The leaves miss it, failing, for a time at least, to do their proper work, and thereby giving a decided check to the upper portion of the plant. By placing plants under glass before the flower-buds have become well set, a soft attenuated growth will be observable, however cool and airy the structure is kept. Frequently, too, such positions as the vinery or Peach house are the only places available; here the leaves have not yet fallen and shade is overabundant. A better plan to bring on late varieties is to take them from the bulk and stand the plants in the sunniest spot in the garden. Give them ample space so that the wind may help the other elements in ripening up the whole of the plants' growth. To obtain blooms in perfection one likes to see the top leaves and buds well developed and hardened.

Meantime, there is much to do in the way of preparation for the flowering quarters. It is well to be ready, as it sometimes occurs that frost compels the housing to be done in a hurry. Necessary cleaning should be done, and although good Grape growers will not strip their Vines of leaves for the sake of Chrysanthemums, superfluous growths and leaves may be cleared. There is no harm either in taking away some of the lower leaves from the Chrysanthemum stems; these soon decay when the plants are placed together thickly under glass. At housing time, again, we may prevent the spread of mildew by dusting with flowers of sulphur. It is the undersides of the leaves which are generally most affected.

The arrangement under glass will be carried out according to convenience and individual taste. Some idea of a good home show should of course be thought of, even when the plants are intended to produce blooms for exhibition. Japanese Chrysanthemums, however, should be stood in the warmest quarters. These open their peculiarly-formed blooms more freely in a warm temperature (from 50° to 55°), but a cooler atmosphere is better for the incurved sorts. They reflex their petals in strong heat instead of curling inwards, and thus spoil the formation so desirable. The Japanese varieties, again, will mostly bear the rays of the sun

better than the incurved sorts. Exceptions to this rule may be made in the case of such dark varieties as William Seward and G. W. Childs, as well as the bronzy-coloured Col. W. B. Smith. These sorts readily decay through the sun shining on the florets whilst damp, caused by the condensed moisture of the night. It is well, therefore, to guard against this by putting the sorts named—and, in fact, any which show the least signs of decay—in the more shady parts of the greenhouse. I have already intimated that it is unwise to leave any plants in the open air after the flower-buds show colour, and it is seldom safe to leave any outside after the first week of October unless protected. The appearance of frost varies in most localities, high and dry positions being understood to escape frost more readily than low, damp ones. When first placed under glass, after being accustomed to the outside air, Chrysanthemums appear to stand still in their growth, as it were, for a few days. At this time great care is needed, especially in the matter of supplying water. In the first place, if the weather be fine it is advisable to damp the paths and also among the pots, but to keep the roots on the dry side. To give them the constant supplies they have up to now received out-of-doors would assuredly lead to disastrous results. In a short time, however, tiny roots will be observed at work on the surface of the soil, then more moisture will be required in the pots, the plants having become used to new conditions. The unfolding florets will tell us that it is advisable to throw less water about the houses, and in fact from this time everything should be done to assist a dry atmosphere. The necessary watering should be done early in the day, so that all may be dry by the evening. Give air abundantly at first by keeping doors and ventilators open, but decrease the amount as the flowers develop. I would not entirely close the top ventilators except to keep out fog, and just a little air passing through from the front will keep the conditions favourable to the opening blooms, with fire-heat according to the weather. I do not favour a constant shade, but if possible I would keep the early morning sun away by the use of some temporary material. It is at this time when most of the damping in the blooms takes place. The plants are cold and moist, having passed through long hours of darkness, and the bad effects of sunshine are quick unless the temperature can have been previously warmed and dried by heat and air. Until this takes place the use of shade is apparent. Decayed petals should not be left on the flowers ; disease soon spreads, and the insect pests must also be watched. Green-fly is the most troublesome. Guard against the spread of it by fumigating with some tobacco preparation when the plants are first housed. The pest is generally abundant under the leaves and is unnoticed. If destroyed early the blooms will be safe. When once green-fly gains a foothold, as it were, in the many folds of a flower, there is great trouble in getting rid of it without spoiling the blooms.

The use of stimulants should be continued up to the time the flowers are nearly fully open. I would, however, advise caution in the use of sulphate of ammonia. The idea that this powerful salt is the one thing necessary to give "finish" to the flowers is still strong, but by overdoses of it many Chrysanthemums are annually ruined. When sprinkled on the surface it is absolutely dangerous. The better plan is to use it in such liquids as cow manure at the rate of an ounce to four gallons. H. S.

Chrysanthemum Queen of the Earlies.—This English raised Japanese Chrysanthemum is most promising in its appearance as a September and early October flowering variety. The blooms are of large size, having long slightly incurving florets of medium width, making a large and massive bloom. When fully developed the petals are somewhat irregular in form. The colour is ivory white, the centre tinged with primrose, which passes off with age. —E. MOLYNEUX.

Chrysanthemum Mme. Eulalie Morel.—For providing cut flowers in quantity at a minimum of cost in labour or for making a display in the open borders when so many of the ordinary occupants have faded, this Chrysanthemum ought to be cultivated. It belongs properly to the Japanese early-flowering section, as it has all the characteristic points about it of this quaintly formed type. The colour is striking, being cerise with a golden suffusion, the reverse golden.—M.

Chrysanthemum Roi des Precoces.—This early-flowering variety is the finest of all the dark-coloured sorts for the open border. From the middle of September it will blossom with freedom until the end of October, should it escape frost. In colour it has a specially dark and velvety appearance, harmonising so well with the Mme. Desgrange trio of white, yellow, and primrose. The habit of growth, too, is all that can be desired, as it grows from 2 feet to 3 feet high.—E.

NOTES ON CULTURE.

PREPARATIONS will shortly have to be made for housing the plants. The fast unfolding florets of such varieties as Avalanche, Miss Anna Hartshorn, Commandant Blusset, Duchess of York, Col. W. B. Smith, and Louise warn us that the night dews now experienced must prove harmful to the development of these early blossoms. After September 20 those who reside in a low and necessarily damp situation are not secure from an early autumn frost. Where Chrysanthemums are cultivated to produce large blooms, whether for exhibition or otherwise, some plants are sure to be more forward in the development of their blooms than others. It is not possible, of course, to sufficiently retard the plants now opening their blooms to enable the cultivator to employ these in November. Instead of allowing the expanding buds to remain out of doors and be spoilt, I prefer to house the plants the moment the colour of each variety is discernible, so that the blooms may be enjoyed even if this be early in October. If it is not convenient to place the plants under cover for a few days after the first florets burst, strips of brown paper cut 3 inches wide and sufficiently long to allow of one end being tied to the peduncle, bending it over the opening bud arch fashion, securing the opposite end also to the peduncle, will give protection from rain, night dews, and shade during the day. The bulk of plants grown for exhibition will shortly also require placing under cover. Inexperienced growers of Chrysanthemums do not understand at what date to house their plants so as to have them in bloom at any given period. Without some knowledge as to the length of time particular varieties require to develop their flowers it is extremely difficult to have the plants in perfection exactly when wanted. The flower-buds of some varieties require a much longer time to develop after they reach a certain stage than those of others. Circumstances do not sometimes admit of the plants being housed at exactly the time wished. If the tender swelling buds should be injured by an early frost in a damp locality, the blooms cannot develop evenly and well. It is not wise to leave plants out of doors without protection of some kind in any district after October 8. Housing should commence the third week in September, removing the very early plants, as previously stated, and those with late or backward buds.

The Princess Teck varieties will illustrate quite well my meaning. These require much longer to expand their blooms fully than any others. Take, again, Princess Victoria in the Japanese section; this is naturally a late-flowering variety and needs more time for expansion. Such as the Queen of England family and Mlle. Thérèse Rey in the Japanese section develop rapidly, the former requiring not more than three weeks after the first petals commence to unfold. Where facilities exist for dividing the plants into three batches, say early, medium, and late, for the purpose of housing and after-treatment, so much the better, as each block, as it were, could then have the particular form of treatment required after the plants are placed under cover. From the foregoing, beginners may learn a little of the requirements necessary in Chrysanthemum culture for exhibition, as it is useless to have only a portion of the varieties in perfection at any particular date. The cultivator who manages his plants in such a manner that all are expanding regularly and well has a much better opportunity of winning prizes, or even of obtaining a thoroughly good home display of large, perfectly developed and formed blooms.

All plants before housing should be made quite clean and free from insect pests. The latter are by far the more troublesome to get rid of. It is useless to house the plants affected with mildew, as it is sure to spread under the favourable conditions of a lack of air and additional atmospheric moisture. No plan is so good as thoroughly wetting every leaf on both sides with the lime and sulphur mixture so often recommended in THE GARDEN. The plants should be given as much space as possible when placed under cover, admitting abundance of air to the plants both night and day. Should the weather continue dry and warm after the plants are housed, they should be syringed overhead at least once daily, say about 2 p.m. A more humid atmosphere will thus be obtained, maintaining somewhat nearly similar conditions to those enjoyed by the plants out of doors. Extremes of both drought and moisture in the air, as well as at the roots, are not favourable to successful Chrysanthemum culture.

E. MOLYNEUX.

SHORT NOTES.—CHRYSANTHEMUMS.

Chrysanthemum Montague belongs to the Japanese section; the peduncles are both erect and stiff, rendering it useful in a cut state. The colour is rich purple-crimson, intensified when opened under glass. It grows fully 4 feet high.—S. P.

Chrysanthemum Vicomtesse d'Avene is a desirable September-flowering variety. The habit is dwarf and stout. The blooms, somewhat incurved, of a pink-lilac shade of colour, are freely produced on long stiff stems, and are thus useful for vase decoration.—E. M.

Chrysanthemum Arthur Crepy is perhaps the finest yellow-flowered out-of-door Chrysanthemum we have in cultivation. The flowers are borne on stout foot-stalks, the colour primrose-yellow fading to white round the edges. The habit of growth is desirable, being upright.—M.

Chrysanthemum Duchess of York.—The present appearance of the plants of this charming Japanese Chrysanthemum betokens some grand blooms, not only in November, but during the month of October. Several buds here are now unfolding their long twisting florets, showing the pleasing soft hue of yellow.—E.

Tufted Pansy Charm.—Mr. A. J. Rowberry is perfectly right when he says that this variety received no special recommendation at the Viola conference held at Birmingham August 3, 1894. Nevertheless, the mention of this variety, together with the confirmation of its raiser's remarks by several speakers in the report of the conference, induced one grower at least to grow it this year, and to anticipate a valuable addition to bedding Violas. The result is disappointment. Every word written against it by "H." is richly deserved ; he in fact gives it more praise than it deserves when he compares it to such va-

rieties as Mrs. H. Bellamy or Archie Grant. These may have their faults in growth, but I hold they are compact growers compared with Charm, to say nothing about the quantity of flowers we get from these compared with the scanty display made by Charm.—W. Baxter, *Woking.*

Orchids.

DENDROBIUM CHRYSOTOXUM.

The accompanying illustration faithfully depicts what is evidently a good variety of this beautiful Orchid, one of the best of the evergreen section. As garden plants there are very few Orchids to beat this, the flowers being remarkably rich in colour, useful either for cutting or the plants for grouping, while its culture does not present any great difficulty. There must, it is true, be a proper system followed with it, and it must be kept to its proper annual routine of growth, but this may be said of any Orchid, or indeed any plant. D. chrysotoxum is a native of Moulmein, where so many beautiful species of the genus are found. The pseudo-bulbs are each about 9 inches in length, and the arching graceful spikes are produced from nearly the top of these when two years old, occasionally on the new growth. The blossoms are rich golden yellow, the lip having a deeper tint with occasional streaks of maroon. This is downy and ightly fringed, and the flowers usually open in March or April. After the blossoms are over the plants commence to grow from the base of last season's growth, and they should then be potted if this is necessary. The pots need only be large enough to take the plants comfortably. They should be drained about three parts of their depth. Cover the drainage with a film of Sphagnum and press this in evenly all round so that the earthy parts of the compost are not swilled out among the drainage. Good peat fibre and Sphagnum in equal proportions and plenty of rough lumps of charcoal or potsherds will make a good rooting medium, and this must be bedded firmly about the roots in order to keep the plants from swaying. The base of the leading pseudo-bulbs must be kept rather above the level of the rim of the pot, and the compost trimmed off neatly to prevent accumulation of moisture about the base of the stems. Great care will be needed in bedding the compost not to snap off the little shoots, for at this time they are exceedingly brittle. When the plants are returned to the growing quarters these growths must be carefully watched, as a little too much water or bright bursts of sunshine may cause the loss of many of them. Only enough water to keep the moss green will be needed at this time, but the syringe must be often plied about the pots in bright weather to keep up the requisite atmospheric moisture. Plenty of heat being afforded, they will make very rapid progress, and as the roots extend more moisture will be required and also abundance of sunlight, in the brisk temperature thus formed the pseudo-bulbs almost visibly distending. By the end of July or early in August the season's growth will usually be finished, when more air and less heat will be necessary to harden and ripen this. This is impossible in the house where grown, so the plants must be taken to a cooler, more airy structure, or if such is not at command they may be placed out-of-doors, shading for a time in the middle of the day, but afterwards allowing full exposure to all weather excepting very heavy and long-continued rains. By the end of August or soon after, they must be placed under cover, as the nights are usually very chilly in September. Just enough water must now be given to keep the pseudo-bulbs from shrivelling, and the night temperature must be kept as near 50° as possible all through the winter. This conduces to a long rest and is a most important detail. No great excitement is needed in spring, the spikes generally showing freely in February and soon coming to maturity. The chief insect enemies are red spider and a small white scale, but these are not usually troublesome, and with ordinary vigilance may be kept under. D. chrysotoxum has been in cultivation since 1845. R.



Dendrobium chrysotoxum. From a photograph by Lord Annesley.

Trichosma suavis.—This is apparently very erratic in its time of growing and flowering, a plant that bloomed in March having made another flowering growth during the summer, and now

the blossoms are just opening. The only fault with this is there is not enough of it, for the flowers are extremely pretty. They are produced on short racemes from the apex of the stems, and the sepals and petals are narrow and white, the lip being yellow in the centre, marked with lines of brownish crimson. The roots of this plant are large and somewhat fleshy, and the compost should be used in a rough open condition. Three parts of peat to one of Sphagnum Moss will grow it well, and only a thin layer is required over good drainage. A cool, moist atmosphere all the year round and plenty of water at the roots must be given while growing. During winter less is required, but at no time must the plants be quite dry. It is a native of the Khasia Hills, having been introduced in 1840.

SEASONABLE NOTES ON ORCHIDS.

No better weather could be desired by Orchid lovers than that of the past few weeks, the continued sunshine serving to ripen up the growth in all the houses and to bring on the later plants rapidly. Dendrobiums, Cattleyas, Catasetums, and the like have especially benefited by the fine weather, for these, of all Orchids, delight in abundance of air at this season, and this has been possible without lowering the temperature. Though the days are fine, the nights are getting longer, and fire-heat has now become absolutely necessary, not a harsh dry heat, but the pipes kept nicely warm, and a little chink of air on the top of the house to keep the atmosphere moving. This does away with a good deal of drip, which sometimes gives trouble now. Among the Dendrobes that have finished growing are D. aureum, crassinode, nobile, Wardianum, Pierardi, and most of the short-bulbed evergreen kinds. D. Bensoniæ, D. Brymerianum, and several others are nearly done, while a few of the later kinds are still in full growth, but as these latter do not flower upon the new pseudo-bulbs, this is not of so much consequence. The popularity of D. Phalænopsis is increasing yearly, and small wonder, for it is a truly magnificent species. Not only are the new growths throwing up from the centre almost before the last leaves are fully developed, but old dry-looking stems from which one would hardly expect flowers are also contributing to the display just now beginning. Deciduous Calanthes require careful watering now that the spikes are appearing, and these must not be wetted if it can be avoided, especially C. vestita, the flower-spikes of which are very easily injured. C. oculata gigantea requires more water than the Veitchi and ordinary types of vestita, but even here care is necessary. In fact, nearly all Orchids are now requiring diminished supplies, the amount of diminution varying of course with the various kinds. Saccolabiums and Aerides are as yet showing no signs of going to rest, the great fleshy roots—rambling over large pieces of charcoal, and in some cases leaving their pots or baskets to lay hold of the stage—being as yet quite green at the points. Angræcum eburneum is throwing out its stiff-looking spikes that will help presently to brighten up the winter months and last long into the new year. Cypripedium Charlesworthi, too, in its varied forms is on the move with me, the beautiful broad dorsal sepal standing out distinctly from the rest of the flower and giving it a very unique appearance. This is certainly a great acquisition, and cannot fail to become popular as its merits become better known. In the Cattleya house C. labiata will soon be a host in itself, following, as it does, close on the heels of C. Gaskelliana. C. bicolor is of quite a different type of beauty to these, but well worth a place on account of its distinctiveness; as also is C. velutina, another prettily marked species, the flowers of which have the additional recommendation of being very sweetly scented. A steady temperature must be kept now in this house, excitement at this season being dangerous to the health of the plants. Plenty of water is required as yet by such as C. Leopoldi, C. granulosa and a few more that root freely at this season, but for the majority less will suffice, those that have flowered upon the current growth especially. It is not yet too late to give new compost to any that may require it, though it would have been better done before this; still, there need be no fear if the plants are not unduly disturbed, and it will be found preferable to keeping them in a close or sour condition all through the winter. In the cool house we have been busy surfacing Odontoglossums and repotting any that needed it. The amount of water that these Orchids require soon soddens the best peat, making it an unsuitable holding for the roots, and it is not unusual for plants repotted in spring to want a little attention again in autumn. The slugs are already busy among the advancing spikes, and close watching is necessary. O. grande and its allies are especially attractive to these pests, and I always take the precaution to raise the plants upon inverted pots in saucers, first dipping them all and allowing them to remain in the water till any insects that may be lurking in the compost are expelled. Oncidium macranthum has finished its growth, and the plants should be stood close to a ventilator kept open day and night in order, if possible, to induce a short rest before the growths start. More care is now needed in damping between the pots not to splash the surface of the compost, or it is very difficult to determine the real state of the roots for moisture. A little of the Sphagnum may also require to be pulled out from around the base of the pseudo-bulbs of small plants, as it is apt to hold moisture to excess. The temperatures as given last month will still be right, but the warm house will not run quite so high by sun-heat, and less shade will be needed in the cool house. Keep a sweet atmosphere by frequently scrubbing the stages, pots, &c., and allow no litter to accumulate about the houses, as, besides having an untidy appearance, this harbours insects of all kinds. H. R.

Masdevallia Davisi.—The distinct colour—a pretty bright orange—of this Masdevallia makes it worthy of a place in all collections. In addition to this, it is a free-flowering and easily cultivated species, thriving well in a cool house. The usual treatment as recommended for the showy flowered kinds suits it admirably. The flowers, produced singly on the scapes, are each about 1¼ inches across the sepals. It is a native of Peru, and quite an acquisition to the genus. It was introduced in 1875.

Zygopetalum Gautieri.—This fine species is now in flower, the elegant racemes being very very attractive at this dull season. These bear about six flowers, the sepals and petals of which are green, with heavy blotches of chocolate-brown. The lip is narrowed near the column, spreading in front, and of a pretty purplish blue, the colour being intensified at the crest and fading to nearly white upon the edge. Somewhat resembling Z. maxillare, Z. Gautieri is a better grower than this kind, and also bears larger flowers. It thrives in shallow baskets or on rafts with only a little compost about the roots and good drainage, but possibly the best way to grow it is on Tree Fern stems. I recently saw a fine plant flowering freely in this manner. The roots under this mode of treatment have something to lay hold of as they grow; whereas in baskets or pots the long rhizomes soon outgrow the space provided for them. Z. Gautieri is a Brazilian Orchid introduced in 1868, and thrives well in a Cattleya house temperature. If given more heat than is here afforded, especially during winter, it is very apt to fall a prey to thrips.—H.

Cypripedium amandum.—Though not so showy as some kinds, this is, nevertheless, a pretty and interesting hybrid, of easy culture and very free growing. Its parents are C. insigne and C. venustum, and it may be described as having flowers fairly intermediate, with foliage inclining more to that of the former parent. The dorsal sepal is light green in ground colour, with stripes of a deeper colour and a few spots near the base. The petals are brown on the upper portion, greenish yellow below, also spotted with purple. The pouch is light green veined with a deeper colour, and much resembles that of C. venustum. The present is its flowering season, and it thrives well in an intermediate house.

FRUIT AND VEGETABLE CROPS.

MIDLAND.

Chatsworth, Derby.—The fruit crops generally in this neighbourhood, considering the very severe winter we have had, are very satisfactory, and but for the late spring frosts there would have been an abundance. Strawberries above the average and very fine. Bush fruits plentiful. Raspberries a failure. Cherries an average crop, but smaller than usual owing to the dryness of the season. Apples and Pears under average. Plums and Damsons scarce.

All kinds of vegetables did well excepting kidney Beans, which were all cut down with the frost and had to be sown again. Potatoes are looking very well; early kinds not so good as usual, but late kinds give promise of an abundant crop, no disease having shown itself at present.—W. CHESTER.

Gopsall Gardens.—The year 1895 will long be remembered for hard frosts and prolonged drought. The frost did much damage to many and varied plants. This is most noticeable, where the plants or trees have reached a good age, by branches or limbs dying away. Peaches and Apples have shown this more than usual this season; also Raspberries, Gooseberries, Currants and Morello Cherries. No doubt, also, the dry season following so severe a winter has had much to do with it, and had we have had a genial season, things generally would have looked better, although on young vigorous trees and plants the fruit crops are above the average. Peaches and Nectarines are carrying a full crop, although later in ripening than usual. Strawberries above the average in size and quantity on one, two, and three-year old plants. Apricots a failure. Morello Cherries above the average in size and quantity. Gooseberries and Red and Black Currants above the average. Raspberries average. Apples a good crop, and promise well now we have had copious rains, which were much needed. The trees most loaded dropped a good number of fruit during the drought, but a full crop now remains in most parts of the neighbourhood. Pears a good crop. Plums above the average, especially those trees on walls and growing in a good sound loam; on standards a light crop, but fruit good.

The vegetable garden is now looking well, thanks to the welcome rains, and most crops promise well for autumn and winter. In the early part of the season we were much troubled with the Cabbage fly, especially on the Cauliflowers. Peas not so good, having suffered much from thrips; but later varieties—especially Ne Plus Ultra—look promising. The early Potatoes are below the average, owing chiefly to the severe check received on June 21, when many Potatoes, with other things, were cut down by frost in this

neighbourhood. Late Potatoes look most promising, as do also most other crops.—J. Lee.

Orton Longueville, Peterborough.—The crop of fruit this year is a very fair average. Small fruits, such as Strawberries, Currants and Gooseberries, have been abundant, and aphis and red spider have not been so troublesome this season. Many kinds of Apple trees have good crops, particularly King of the Pippins, Cox's Orange Pippin, Lord Suffield, Warner's King, Striped Beaufin, Baldwin, Keswick Codlin, Alexander, Northern Greening, Brabant Bellefleur, and a few other kinds. Pears are much below the average, as was to be expected after the heavy crops of 1893 and 1894. A few, however, are bearing well, such as Doyenné d'Ete, Orange Bergamot, Vicar of Winkfield, Crassane and Beurré Bosc. Nuts only a partial crop, but Quinces good. Many kinds of Plums on walls are bearing well, but trees in the open much below the average. Apricots are a fair crop; also Peaches and Nectarines; but the crop is not so heavy as in 1894.—A. Harding.

Warwick Castle.—The Apple crop this year is the finest I ever remember; the severe winter and cold spring retarded the blossoms till the most dangerous frosts were over, the result being a remarkable set. Shortly after the young fruits were formed a period of dry weather set in; this caused many to drop, and both trees and remaining crop are all the better for it. The trees are very heavily laden with clean, healthy-looking fruit likely to attain a good size. Pears are also very abundant, early varieties rather small, later ones promise to be of average size. Plums average; the extraordinary crop obtained last year weakened the trees too much to admit of their carrying a heavy one this year; at least such is my opinion, which is confirmed by an extensive market grower in the neighbourhood. This grower's trees were last year caught by a severe frost when in flower; consequently his crop was a failure. This season, however, his trees are loaded with fruit, though such is not the experience of the majority of neighbouring growers. Cherries other than Morellos are not much grown in the district; these latter are a heavy crop. Peaches and Nectarines average. Apricots in many instances a failure. Small fruits extremely abundant and very good. Strawberries exceptionally abundant and good where the soil is somewhat heavy. There is, however, a good deal of light soil in the neighbourhood, and in the gardens where timely waterings could not be given the fruits were small, and many of them failed to swell.

Early Potatoes rather small, but sound and of fine quality. Early Puritan has given us by far the best crop of fine tubers. Late varieties promise to be a fine crop in every way; no trace of disease at present.—H. Dunkin.

SCOTLAND.

Coltness, Wishaw.—In reply to your inquiry regarding the condition of the fruit crops in the gardens here and neighbourhood, I have much pleasure in stating that these are both abundant and good this season. Early Strawberries suffered somewhat from drought on dry situations, but the crop on the whole has been good nevertheless. Gooseberries are a more abundant crop this season than for many years past. Red Currants and Raspberries plentiful, as also are Black Currants, but the fruit of these is small owing to the dry summer. Pears and Apples are also bearing well.—J. Grahame.

Terregles Gardens, Dumfries.—Owing to the severity of the past winter and spring fruit trees were late in flowering in this district, and the weather being favourable there was a good set of all kinds of fruit. In spite of the dry season the crops are generally over the average. Apples are a splendid crop, the fruit large and well coloured. Pears are also a heavy crop and promise to finish well. Plums on wall a good average crop, standards thin, except Victoria, which is good. Cherries average. Strawberries in some places suffered from the drought, but where watered and well mulched, the crop, especially on young plants, was an enormous one, the fruit large and flavour good. Raspberries, Gooseberries and Currants were heavy crops.

Early vegetables were very unsatisfactory; successional crops are doing well.—Alex. Chalmers.

Urie, Stonehaven.—Fruit crops here and in the neighbourhood are quite up to the average. Apples a little under the average. Pears an average crop, but small, as the weather in June was too dry for them. Cherries a good crop, but owing to such a quantity of wasps this season we had to pull them too soon. Strawberries an extra fine crop and of excellent quality. Gooseberries above average. Red, White and Black Currants heavy crops. Raspberries are abundant and large this season. Victoria Plum is the only one worth planting.

Vegetables in general have done very well, Peas extra well, but spring-sown Cauliflower has been a failure in most cases owing to clubbing. We escaped the severe winter wonderfully, only a few shrubs having died. The rain came in June just in time to save our crops from being utterly burned up.—A. Reid.

Whittinghame.—Fruit crops are, as a rule, very good here this season, rather over the average in most cases. Strawberries suffered somewhat from the drought, the early varieties being rather small, but late sorts have been large and abundant. Apricots are with me almost a blank, though this is not generally the case in this district. Outside Peaches are also very scarce. Pears and Plums are under average. Apples a very heavy crop, and clean and healthy looking. Cherries, both sweet and Morello, an abundant crop; so also are Raspberries, Red, White, and Black Currants, and Gooseberries. I have tried Plums here as orchard trees, but without any success; even Victoria refuses to fruit unless upon walls. The sorts I grow are Green Gage, Golden Gage, Kirke's, Jefferson, Washington, Golden Drop, &c. Jefferson and Golden Gage are usually the best flavoured we have. I have not tried any of the newer sorts.

Kitchen garden crops of all kinds are very good this season. Peas extra, Potatoes good, and as yet showing no signs of disease. Field Potatoes never looked better than they do at the present time. We have had abundant rains lately, and crops of all sorts have been greatly benefited thereby. The only crop which shows any deficiency is the Turnip where it had to be re-sown, but, fortunately, this was not very general in this quarter. I am glad to say that there has been comparatively little damage done to shrubs, &c., by the past severe winter, although upon two occasions the temperature fell to zero. Our large Eucalyptus suffered to the extent of losing all its leaves, but they have been again replaced by a most luxuriant growth. One result of the check received has been that a large quantity of young shoots have broken away upon all parts of the old trunk, so that it is now better furnished than ever it was before. Several other varieties of Eucalypti which we had on trial were killed outright, including a plant of E. coccifera ten years old. On the other hand, such plants as Aucuba japonica were not in the least injured. Garrya elliptica (in the open) was very slightly injured. The only shrubs we have seriously injured were some very old plants of Laurus nobilis.—John Garrett.

Taymount, Broughty Ferry.—The winter of 1895 will long be remembered for its destructive frosts. Here the thermometer fell 4° below zero on four consecutive nights. I have seldom seen fruit trees so laden with bloom as they were this year, but since then the drought has materially affected fruit trees, and had it not been for the showers we had, the Apple and Pear crops in this district would have been under the average both in size and quantity. They are now gaining in size rapidly, but the crop will be a light one. Peaches and Nectarines are not much grown out of doors in this district. Small fruits of every description have been abundant and good. Strawberries have not been so fine for years. Vicomtesse H. de Thury is the favourite in this district.

The drought has had a singular effect upon vegetables, but since the rain came they have made quite a rush into growth. Potatoes are good, and up to now show no sign of disease.—Andrew Smith.

Glamis Castle, Glamis.—Generally speaking, the fruit crops in this district are above the average. Apples, Pears and Plums are very good. Cherries and Gooseberries are somewhat small, owing to the drought in the early part of the season. Strawberries and other small fruits were very fine. The severe frost in winter killed Raspberry canes in some cases to within 1 foot of the ground, and Gooseberry bushes died owing to the continued drought in May and June.—Thomas Wilson.

Tyninghame, East Lothian.—While fruit as a whole is a good crop, small fruits without exception have been above the average, and of these Gooseberries alone have suffered from drought The intense frost appears to have passed away without leaving any bad effect on out-of-door fruits. Among the larger fruits Plums are undoubtedly the crop of the year. Figs and Apples are also up to the average, while Pears, Peaches and particularly Apricots are very deficient. Since the break up of the drought, fruit has swelled rapidly, and with a good autumn, winter Apples and Pears may be expected to be of extra quality.

With regard to vegetables, the season has been fairly good; the frost, indeed, left little green stuff, all the Broccoli having been killed, with the exception of Sprouting and Carter's Universal, and Spinach late in starting. But what had every appearance of being one of the latest seasons proved instead one of the earliest. Early Cauliflowers and Peas I have never seen so early or finer, and had it not been for a scourge of maggots amongst Cauliflowers, Cabbages and Onions, the season would have been an extra good one Potatoes are a splendid crop. In the quarters set apart for flowers, many Montbretias, Gladioli, Hyacinthus candicans, Tritomas and Alstrœmerias were killed. In some gardens Carnations have failed, and Pentstemons, Calceolarias and other half-hardy subjects were all but destroyed. Bedding plants in general are not so good as usual, though Roses of all sections have been wonderfully fine.—R. P. Brotherston.

Murthly Castle, Perth.—The crop of fruit in this district may be considered a good average. Apples are a fair crop both on standards and wall trees. Plums, including such varieties as Kirke's, Jefferson, all the Gages, and Coe's Golden Drop, are heavy crops. Pears fair. Cherries (Morellos) a heavy crop, clean and good. Small fruit, Gooseberries, Red and Black Currants over the average. Strawberries fine, although the earliest suffered from want of moisture. Raspberries a good crop: the canes suffered from the severe frost of last winter.

Vegetables of most sorts are looking well, with the exception of Cauliflowers and Onions. Peas are grand. Potatoes a heavy crop, no disease, but I fear, with so much rain, it will begin to develop soon. Our winter vegetables got severely crippled, scarcely a green thing being left, except Cabbage, which was protected with snow. The summer so far has been marked by extremes of heat and cold.—James Laurie.

Balcarres, Fife.—The fruit crops in this district are very good. All small fruits are exceptionally good both in quality and quantity. Apples a fairly good crop. Pears fair. Plums very heavy. Peaches good. Cherries very good, particularly Morellos.—Edward Tate.

Larbert House, Stirling.—The very severe winter we experienced here apparently has had no bad influence on fruit trees and bushes. The Apple crop has not sustained the fine promise of the spring. Bloom was everywhere abundant and gave promise of a full crop, but the long spell of dry east winds, powerful sun, and continued drought brought on a plague of caterpillar, aphis,

&c., that completely did for the crop; some trees, indeed, nearly succumbed entirely, and it was only by repeated syringings with strong solutions of black soap, paraffin, and hellebore that our trees were saved from absolute ruin. Apples on walls are fairly good, and one or two pyramids. Pears on west walls are good. Plums on walls are abundant and above the average. Peaches and Nectarines are all grown under glass and are good. In some places hereabout Peaches, where grown on the open wall, are a fair crop, but a continuation of this damp weather I am afraid will be fatal to ripening. Cherries here have been plentiful. Strawberries have been abundant and good. Blackberries, Red Currants, Raspberries, and Gooseberries have been grand, and everywhere round this district I am assured they have been the same.

Vegetables are now looking well, but in the early part of the season the whole of the Brassica tribe suffered terribly from the drought; indeed, I never remember a season in which clubbing has been so rampant as this.—DAVID AIRDRIE.

Carron House, Stirlingshire, N.B.—Fruit crops generally are over average and Apples are likely to be large as well as abundant. On the heavy land in the valley of the Forth vegetation suffered little by drought. Small fruits, Currants and Gooseberries especially, have been a very heavy crop and unusually large in size. Mulching protected them during the dry weather and the rains came in time to complete the crops. Strawberries were plentiful and of good size, but the drought shortened the fruiting period. President was an unusually heavy crop, for it is not surpassed for cropping in this locality. John Ruskin, though not of high flavour, was very abundant and makes a good preserving Strawberry. Aberdeen Favourite as a second early was good, and Duke of Edinburgh was large and showy with a fair crop.

Vegetable crops generally are very luxuriant. Potatoes have been early and of fine quality, but the heavy rains have changed them for the worse, but no disease has yet appeared. The frost (so severe during last winter) did no harm to fruit trees, but destroyed a number of common shrubs, Cupressus Lawsoniana especially. Roses on arches, Hybrid Perpetuals and Ayrshire suffered severely, but dwarfs did not.—M. TEMPLE.

Darnaway Castle Gardens.—Fruit crops this year very disappointing. Gooseberries, Black and Red Currants poor and very small. Strawberries an average crop, but of no flavour. Raspberries average. Apricots very thin. Peaches average crop. Plums a heavy crop, much smaller than former years. The following varieties we grow on walls: Early Orleans, Denniston's, Pond's Seedling, Kirke's, Washington, Magnum Bonum (yellow and red), Goliath, Coe's Golden Drop, Denbigh Seedling, Green Gage, Transparent Gage, Victoria. Pears a good average crop, but small. Apples below average and small. All fruits are smaller in the north of Scotland this year, partly owing to the wet summer and want of sun.

Vegetables did fairly well. Both early and late Potatoes are looking well, quality good and free of disease as yet.—D. CUNNINGHAM.

Dunrobin Castle Gardens, Sutherlandshire.—The fruit crop here may, on the whole, be classed as average. In the case of Plums, Apples and Pears the crop is somewhat irregular, some trees bearing a heavy crop and others but thinly furnished. The season here has been very different from that experienced in the midland and southern counties of England. Instead of the drought experienced in the south, we have had a rainy and comparatively sunless season. From June 4 to August 16 rain has fallen on forty-seven days out of seventy-three. We had a dry spell early in May, which was very troublesome for the germination of small seeds sown about that time, but, with that exception, 1895 has so far been rainy and dull. In some seasons the case is reversed, but it is rather surprising to find a long-continued drought in the southern portion of the British Islands while most of the same period the northern portion was suffering from too much rain and dull weather. The last winter did little damage here. Although long continued, the ground was protected most of the time by snow, and being so near the sea, 17° of frost was the most experienced. Small fruits have been abundant and good. Elton Pine (still our best late Strawberry) is at this date (August 17) yielding plentiful gatherings both for dessert and kitchen use.—D. MELVILLE.

Hopetoun House, Queensferry.—Apples an average crop, Lord Suffield and Keswick Codlin being the best. Pears and Cherries on walls good. Plums on walls under average, standards (Victoria) very good. Apricots fairly good, fine size. Peaches scarce on open walls, extra fine inside. Nuts very few. Small fruit, as Currants, Gooseberries, Strawberries and Raspberries, abundant. Hardy fruit trees in general were well prepared to stand the severity of last winter, the wood being well ripened last autumn. The blooming season was all that could be desired, but the long spell of drought brought with it an abundant supply of caterpillars and also red spider, and was the means of spoiling a fair set of Apples of all kinds. Apples in particular were sadly crippled until we got the rain in the beginning of July. Since then the trees have assumed a more healthy and vigorous appearance.—JAMES SMITH.

Cawdor Castle, Nairn, N.B.—In Nairnshire we have had no such dry season as you have had in England. We had rain almost every day for six weeks. Gooseberries, Raspberries and Currants extra good. Too much rain for Strawberries. Victoria Plums on standards hanging like ropes of Onions and breaking the branches. Peaches and Apricots poor. Apples and Pears fair. The Victoria is the only Plum worth planting here. It is a sure bearer; Orleans bears now and again. For flavour, Green Gage, Jefferson and Golden Drop are the best.—JAMES MAITLAND.

Lennox Castle, Stirlingshire.—The fruit crops in the gardens here and neighbourhood are the best I have ever seen. Apples, Pears, Plums, and Cherries are extra good. Strawberries, Raspberries, Gooseberries, Red, White, and Black Currants are also an extra heavy crop. A good many Evergreens suffered. The dry spring has done very little harm to crops in this neighbourhood, but we have had a terrible plague of Onion and Carrot maggot.—J. TINSLEY.

Alva, Clackmannan.—The fruit crops are on the whole above the average. Peaches, Nectarines, and Apricots are an average crop. Figs stood the severe winter without protection and are now looking well. Apples an average crop. Pears, Plums, and Cherries are above the average; trees clean and healthy. Small fruits are abundant. Gooseberries a wonderful crop, although lacking in flavour, probably due to so much wet weather lately.—H. MCDERMENT.

The Gardens, Glenormiston, Innerleithen.—The fruit crop in this neighbourhood is generally good, but it has suffered considerably from the dry weather, the soil in Peeblesshire being rather light on the whole. At Glenormiston we have a heavy soil on a clay subsoil. On that account we have secured good crops—I may say heavy crops, with the exception of Cherries, which are rather light. The Strawberry crop suffered considerably from frost early in June. Still we had a fair crop withal.

Potatoes suffered from the same cause, and I should say are the worst of all the vegetable crops. Early Turnips were attacked by fly to some extent. Other crops are all very good on the whole. As to the severe winter, I have noticed no damage whatever to any of the fruit trees; crops somewhat heavy owing to the long rest, perhaps. Roses of course were cut down to the snow level. All the best Tea Roses stand the winter well, and afford us at least three times the amount of cut blooms that the H.P.'s do. They begin to flower in June, and at this date (Aug. 24) are still crowned with a mass of flowers and buds. In most of the lower lying places shrubs have suffered somewhat from the severe winter, none more so than the Laurels. Anything in the way of ever greens (tree or shrub) that were newly planted before the severe frosts have almost all perished. Shrub-planting about this part is safest done about October or delayed until spring.—A. DICKSON.

GARDEN FLORA.

PLATE 1033.

IRIS GERMANICA.

(WITH A COLOURED PLATE OF I. GERMANICA KHARPUT.*)

By the above name the large and comprehensive group of Bearded Irises (I. barbata) is generally recognised in our gardens. They are also known under the name of German or Flag Irises; indeed, the commoner kinds are invariably alluded to under the latter name. Of the group as a whole, embracing as it does several well-marked species, together with their numerous varieties, it is impossible to say too much. The ease with which they are managed, their adaptability to all sorts of soils and situations, together with their almost endless variety, commend them to a very large number of those interested in gardening. And not the least of their charms is the indescribable beauty of many of the varieties. Indeed, one of the most extensive growers of these beautiful hardy flowers refers to these Irises as the "Orchids of the flower garden." As a matter of fact, these beautiful and easily grown plants constitute the glory of the hardy plant garden in the early summer, and for a very considerable season contribute a large share of beauty and diversity of colouring of which one seldom tires. Regarded collectively, we find in their blossoms many shades of dark violet and purple, almos every conceivable shade of light and pale blue together with the softest shades of mauve, som exceedingly delicate and almost transparent. Then we have shades of lemon, yellow and golden, together with coppery bronze, and browns in variety, which owe their origin to I. squalens, as well as pure whites and primrose, and many more. That any garden worthy the name should be without some at least of these useful flowers is hardly possible, yet I doubt not there are many amateurs and villa gardeners who would gladly grow a few of the more distinct kinds if only space permitted.

Very few hardy plants adapt themselves to so many situations and such varied circumstances as these Flag Irises. They may be arranged in the foreground of shrubberies in large telling groups with advantage and excellent effect if at planting time the shrubs are designedly arranged at wider distances apart than is usual. Such an arrangement will permit of planting large irregular groups in separate masses of colour at intervals throughout the garden, and in positions all too often occupied by the too trim hedge-like outline of a shrubbery bank. In places such as these, proximity to the roots of large trees should be avoided as much as possible. Then again, charming effects may be produced by planting Irises in the wood, especially near to the Grass walks and other openings where they catch the eye. Though seldom seen in such positions, it is surprising how well these Irises succeed on banks and slopes, a fact of which full advantage should be taken, seeing so very few plants are a success in these places.

The kinds that appear best suited to these

* Drawn for THE GARDEN by H. G. Moon in his garden at St. Albans. Lithographed and printed by Guillaume Severeyns.



latter positions are those most closely allied to the germanica type. All of this section grow and flower with as much vigour and freedom as in many prepared borders. Indeed, I have in mind while writing a large railway bank quite near to London which in the latter part of May and onwards in each year is quite gay with the flowers of these Flags. The soil is mainly composed of sand and gravel, and, assisted by the rainfall which drains towards the Irises, they flourish surprisingly. In the herbaceous border of course much will be made of the choicer kinds, while reserving the surplus as well as the more plentiful kinds for the margin of the pond or lake or for wet and marshy spots, in which they appear as much at home as they do in sandy soils. Then again, in convenient positions on the lawn or as forming a belt to other plants, such as Rhododendrons or the like, they make a most agreeable change. Anywhere in fact where space and opportunities permit these accommodating Irises should not be overlooked. In planting such things in the Grass or around the margin of a lake where Grass exists, it will be advisable to loosen the turf somewhat and to remove a portion altogether so as to permit of the due extension of the rhizomes. The soil should also be well loosened to a depth of 12 inches or 18 inches to assist the plants in the start.

In the herbaceous border, or where beds are wholly devoted to the better kinds, the plants well repay for deep digging and a moderately rich soil. In light, loamy or sandy soils they are perhaps most at home, and particularly is this true of the varieties of squalens and variegata. Many kinds grow perfectly on stiff, heavy soils, while the major portion prefer a soil which is neither light nor heavy. In the lighter soils, however, they may be planted or replanted for eight or nine months of the year with impunity, but many kinds will not root afresh in winter-time if planted late in soils that are heavy and cold. While admitting that these Flag Irises may be planted over so lengthened a period with good results, I may be permitted to state emphatically, as a result of experience and observation, that the correct season for planting is the month of April, just prior to the rhizome and its attendant roots pushing forth. I have planted at all times from September to the end of June, but find much the best results from April planting, and give preference to this season for the rarer or more delicate rooters or growers. For example, Victorine and aurea are two kinds finding much favour, but neither is vigorous in constitution, and it is just such as these that need special care and planting at the right time to make them a success. Of course, April planting, if the plants are much divided, means loss of flowers in June, but if it means increased vigour also for the year following, I think there should be no two opinions in the matter. Fortunately, however, the two kinds named are exceptions to the majority in this handsome race of plants.

These few notes would scarcely be complete without some mention of the value of these Flag Irises as cut flowers, and for which they are all beautifully adapted. In fact, during the past few years quite a growing taste has arisen for their flowers, and in season they may be seen in our leading markets in great numbers. For home decoration they are charming, particularly the soft, delicate mauve shades, the pure white, or the bronzes and rich yellows. If required to send to a distance they should be cut while still in the bud, and on being placed in water on arrival at their destination, will gradually unfold their flowers in all their natural freshness and beauty.

The accompanying plate represents one of the true germanica section, Kharput, which is of somewhat recent introduction. It is an excellent kind, equally as early as the type in its flowering. Other early kinds are alba or florentina, atropurpurea and Crimson King. The following are some distinct kinds and afford considerable variety: Albicans (syn., Princess of Wales), pure white; L'Innocence, pure white; Darius, yellow; Gracchus, pale yellow; Cordelia, rosy lilac and crimson; Queen of May, full, rose-lilac, fine; Dr. Bernice, bronze and purple; Arnoldi, claret, bronze and rich velvet-purple; Aurea, golden; Mme. Chereau, white, feathered violet, most charming kind; Pallida and Imogene, lovely soft lavender-mauve shades; Spectabilis, deep purple; and Robert Burns, golden and velvety maroon. E. J.

The Week's Work.

HARDY FRUITS.

Gathering fruit.—The most important work at this season is storing and gathering the fruit. In the case of large or soft fruit great care is required in handling. Those who have a good knowledge of varieties know the value of leaving the later kinds till the fruit is thoroughly matured to prevent shrivelling and decay. In no case do I advise premature gathering, but with the season so far advanced it is not advisable to allow soft fruit, such as Warner's King or Lord Suffield, to suffer by ripening on the trees or to drop. Apples with a tender skin may be gone over more frequently, the ripest being stored, first securing large specimens. Those who thinned their fruit a few months ago will now reap the benefit. In placing large fruit in baskets it should not be heaped up, but laid in a single layer with a soft material to rest upon, such as fine hay or dried grass; the latter I like best, being softer. Care should also be taken that the fruit does not press against the sides of the basket. Many of the Apples are this season ripening earlier than usual, and even in late districts there should be no delay in securing what is left of the crop of what may be termed early cooking kinds, such as Hawthornden, Lord Suffield, and Warner's King. The same remarks apply to Pears. With these there is more decay than usual, and wasps are troublesome. Such kinds as Pitmaston Duchess, Marie Louise, and Margaret Marillat are earlier than usual and need to be stored to save the crop, as though protection may be afforded from birds, it is difficult to keep wasps from large pyramid or bush trees. Pears decay so soon that the seasons given for these fruits cannot be relied upon. The cultivator will do well to store in a cool place, relying upon different rooms if possible for late kinds which require less attention, and if space is not available give keeping kinds the coolest and darkest place; indeed many varieties keep well stored in boxes in layers if placed in a cool, dry place. It can readily be seen if the fruit comes from the trees without force, and a true test as to fitness is when the pips are well browned and quite firm. The fruit should be gathered when quite dry, and any speckled or grub-eaten samples should be kept clear of fruit stored for future use.

Storing fruit.—Of late years the belief has sprung up that an elaborate store is necessary, whereas the reverse is the case. By this remark I do not mean to convey that rough and ready treatment will conduce to long keeping, but that many shifts can be made to store when there is a glut of fruit. A cool room with a thatched roof will be better than a warm heated place with daily fluctuations of temperature. Again, dry cellars make a good store. I always kept my late Pears best in a dry disused ice well, and many kinds of Apples, such as Northern Greening, Striped Beaufin, and Minchal Crab were stored in thick layers on floors in a similar building. Only those kinds with hard flesh can be stored thus. I have found an airy warm room the worst place to keep Apples, and in no case should the fruits come into contact with straw or hay, no such covering being necessary over shelves or on floors if the fruit is a long-keeping kind. Free ventilation is necessary for early fruits, but draughts should be avoided. I prefer a dark room with sufficient air or ventilation to let the moisture and gases escape. Cleanliness is important, and for late Apples barrels lined with clean paper to exclude air or draughts may be used if the fruits are packed in carefully.

Late Plums.—Fruits of late kinds as they ripen should be placed in tissue paper and be laid in shallow boxes or drawers; treated thus they will keep good for weeks and do not lose flavour. For late dessert use Coe's Golden Drop is one of the very best keepers if placed in single layers as advised above, each fruit being twisted in soft paper. Such varieties as Belle de Septembre, Monarch, and Wyedale will keep a long time in a cool place; indeed some seasons I have kept Wyedale well into December. This kind should find a place in all gardens. Damsons are very plentiful, but soon decay if placed in thick layers. To preserve late fruits it is well to place thinly on floors in a cold store, and in gathering take those on the sunny side first. The Cheshire or Shropshire Prune is a fine late variety, and should be gathered last, being an excellent keeper.

Selecting new fruit trees.—Now is a suitable time to select new trees. No matter how well a garden is managed there is a certain amount of planting every year. If the trees be planted early there are very few losses by severe weather or by drought in the growing season. By selecting a certain number of trees yearly these can be prepared by growing them one year at home. They may be purchased either as maidens or after one season's growth from the graft. These remarks apply more especially to stone fruits, as by growing as advised they may be lifted the following season much earlier than when first purchased from a nursery. Only those kinds which thrive in the locality should be grown. Any new varieties should be grown sparingly for a time. Quality should be the first consideration in a private garden, not mere size. If both, however, can be secured, so much the better, as appearance goes a long way. Any small bush fruits required should likewise be secured. There is always a demand for these trees very early in the season, and if obtained late the plants are not always so good as one could desire. Gooseberries and Currants are often seen covered with fungus; whereas new trees would give much finer fruits and in quantity. In purchasing these trees always select those with a single stem, as there is less trouble with sucker growths and the fruit is more readily gathered.

Raspberries.—Plantations that have been long in one place should be renewed, and in case the canes are much exhausted, it is well to purchase new stock. At this season old quarters need attention in the way of final thinning and removal of useless wood, only leaving what may be termed the bearing wood for next season. From four to six new growths are ample for a stool, leaving the smaller number if the shoots are strong. In many cases it will be found the best canes are at some distance from the old stools, having pushed out in search of new soil and room to develop. These must be retained if there is ample space for them to grow. I am aware stools wide apart look unsightly, and when they get out too far it is well to replant. Raspberries are often allowed to remain too long in one place, change of soil and position being beneficial. In replanting, trench the land and manure freely with decayed animal manure, plant firmly and give plenty of room. Now is a good time to feed plants which have borne freely, unless a good mulch was given earlier. Liquid manure may be given the plants now, as the food will assist in making good fruiting wood for next season.

Strawberries.—The beds recently cleared of runners should now receive attention as early

as possible if required to fruit next season. Plants that have borne a crop will well repay liberal feeding. No time should be lost in cleaning, cutting away any weak runner growths and old leaves, and making the quarters neat for the winter by lightly hoeing between the plants and raking away rubbish. Now is a good time to feed liberally, as the stronger the crowns are, the better will be next season's crop. By manuring now time is saved in the spring, the plants then only requiring some litter to protect the fruits. Young plants if not strong do well placed in a sheltered corner in lines, and transplanted with a ball early in the spring. Plants in pots for spring planting should be plunged in soil or ashes well over the rims of the pots to protect from frost.

G. Wythes.

KITCHEN GARDEN.

Leeks.—These continue to make growth over a long period; therefore feeding where the plants have exhausted the manure which was dug into the trenches may be carried on with a liberal hand. In a dry season like the present liquid manure is not always procurable in sufficient quantities to meet the demand of large kitchen gardens, but a good substitute may be found in fish manure sprinkled freely in the trenches and well washed down to the roots by artificial means. The earliest planted lots, if wanted for use in November or for exhibition, and which received a partial earthing up three weeks or a month ago, may now, after being thoroughly well soaked, receive the final lot of soil. Water the afternoon previous to earthing. Some growers recommend shortening the main leaves somewhat, thinking that thereby more strength is thrown into the stems and heavier roots are obtained. With the exception, however, of reducing their length when transplanting them in the spring, I never practise it, as I think little, if anything, is gained by the practice. Main crop lots not needed for use until December and January may be allowed to grow away for another fortnight before any soil is placed round them, as this process doubtless has a tendency to check growth, and Leeks being very hardy there is no fear of injury from early frosts even though unearthed, as in the case of Celery, which soon suffers if frozen through when in a wet state. The same liberal system of feeding these successional beds of Leeks should be practised for some time yet, as the ground in most gardens is in a dry state in spite of the showers which have fallen of late. Plants growing on the level ground, and which are intended for use in soups and ordinary kitchen work in order to save the more important supplies, should have the soil between the rows stirred occasionally, and always immediately before water is applied, as the loosened soil keeps the water from running in channels and the roots of each individual Leek get their full share of moisture.

Tripoli Onions.—The second sowing of autumn Onions intended to follow those sown at the commencement of August will now need attention. First of all let the seedlings be freely thinned out, making of course an allowance for a probable attack of the Onion maggot, which on hot soils is more troublesome this autumn than usual, owing to an insufficiency of root moisture and a somewhat tardy growth. After hand-weeding and putting the Dutch hoe through the rows, apply a liberal surface-dressing of guano and soot, watering freely afterwards. I have seen good results from an autumn mulch of leaf-mould or old Mushroom manure on sandy porous soils, this not only conserving the moisture, but if sufficiently thick, protecting the bulbs from injury by frost during winter. It also prevents them from swaying to and fro, as they are apt to do in exposed situations in windy weather. After removing the surplus plants, make the remainder firm by pressure from the finger and thumb. Late-sown crops of Spanish Onions are this year much affected by mildew in low-lying situations; therefore extra care is needed in harvesting the bulbs. Remove them at once if possible to any airy open shed, or, better still, a cool glass house, where they can be frequently turned. If left out in the open garden, mildew and probably a second growth will make great headway.

Sorting Potatoes.—In most gardens where Potatoes as they ripen are lifted they are placed in open sheds with a view to their being overhauled on wet days. As, however, wet days are less frequent this season than usual, it will not be wise to neglect sorting for any length of time, as when the tubers lie thickly together and the weather is very warm, overheating engenders a second growth and encourages disease to spread amongst any sorts which may already have become affected. All tubers, whether intended for eating or seed, are much better for being stored in a cool place where abundance of fresh air can reach them. For this reason a north aspect is preferable to any other, a more equal temperature being there preserved, and diseased tubers should be burnt or buried deeply, not given to pigs, as it is stated by acknowledged authorities that manure from piggeries where diseased tubers have been used for feeding, if dug into land intended to be cropped with Potatoes, will induce disease; hence the necessity for care in this matter. The eating portion of the tubers will be better for a covering of dry Oat straw or Bracken, in order to prevent them turning green. Earlier lifted lots must not be forgotten, but examined occasionally for the removal of any odd diseased tubers, the turning itself doing them good by allowing the air to circulate amongst them. Where price is an object, it will be wise on the part of all those who need seed of any new variety to purchase in autumn, instead of waiting till spring, as then the price of good seed is invariably raised. If such sorts as Ringleader, Sharpe's Victor, or any of the first early sorts should emit sprouts, remove them at once, or much of the vitality of the tubers will be drawn out.

Brown Cos Lettuce.—The plants of this good old hardy Lettuce from early August sowings will now be coming on apace, and will, with liberal thinnings and waterings, make strong plants for pricking out under the shade of south and west walls from the first to the third week in October. With this operation in view, the ground should be got in readiness for the young plants, several soakings assisting to consolidate it by that time. If the soil is in fairly good heart, old Mushroom manure forked in in fair quantities will grow Lettuces well, such material producing a growth calculated to stand the winter better than that resulting from the free use of rotten farmyard manure, and feeding in spring can always be resorted to. After turning up the soil to the required depth and incorporating the manure, it should first be well moistened, then well firmed, this being repeated in the course of four or five days.

Latest dwarf Peas.—Care will now be needed in the case of any rows of Chelsea Gem, William Hurst, or English Wonder, sown for supplying a few dishes after such tall sorts as Ne Plus Ultra are past yielding. The same syringing as advised for these taller sorts a few weeks ago will be necessary with the dwarfs if mildew is to be kept at bay, and as the pods have just well formed, encouragement must be given to the swelling Peas by administering a copious watering once in ten days over a good mulch of rich manure; support the haulm with neat sticks, and thin out if found to be still too thick. Owing to the protracted September drought, Scarlet Runner Beans will still need root moisture where yielding freely.

J. Crawford.

Violets from cuttings.—When inspecting the stock of Marie Louise Violets at Blickling recently I was much struck with the single crown character of the plant, duplicates being the exception. On questioning Mr. Oclee, however, he informed me that the plants were raised from cuttings instead of runners, as is most commonly practised, and that finer blooms are the result. I have heard of Violet growers reducing the crowns by the aid of a sharp knife after the plants from layers were in active growth, but I have never practised it myself, although as a rule I gather better blooms from plants with say three or four crowns and a moderate amount of foliage than from thick bushy ones, and it goes without saying that damping in winter is more easily combatted. I knew one good grower who always selected as many of his runners as possible from plants having few crowns, no doubt thinking, as Mr. Oclee does, that the fewer crowns and less foliage the better. —J. C.

Flower Garden.

AMERICAN IRISES.

American Irises do not seem to have received the attention from cultivators that they deserve. It is doubtful if there be at this time a complete collection even of the different species in any one garden, while there are no doubt good varieties which have never been cultivated, and probably not even collected for herbariums. Again, there are varieties which have only a local reputation, and which have not been generally distributed. I have found a number of varieties of this kind; some of these have not yet flowered here. Some of our Irises are most difficult to establish, and it will task the skill of an eastern grower to flower some of the west coast species, which resent removal and naturally are at rest during our summer season. We have a trio of beautiful dwarf Irises in I. cristata, I. lacustris and I. verna, of which the first two belong to the crested section, or Evansia of the botanist. Of these

I. cristata (I. odorata, Pers.) is the prettiest and usually most amenable to cultivation. It increases rapidly if the short creeping rhizomes are planted in moist, light rich earth; though, on the contrary, it will grow vigorously on a rockery, where, however, it is likely to be injured during a hard winter. When covered in the spring with its light mauve-coloured flowers nothing could be prettier.

I. lacustris has the habit of I. cristata, and purple flowers with a yellow crest. It grows on the shores of the great lakes, where it is very plentiful. It thrives under cultivation in a moist soil, but is rather shy in showing its flowers.

I. verna is a member of the sub-genus Pardanthopsia, of which there are only four species, the others being very rare. It has short, creeping root-stalks, narrow, taller leaves and no crest; its flowers are dark rich purple, with yellow markings. It is a plant not uniformly happy in gardens, but not a difficult subject. Everyone knows the common Flag of our Eastern States,

I. versicolor (I. picta and I. sativa, Miller), a plant which thrives equally well in brackish, marshy, fresh-water swamps, or perfectly dry ground, and may be depended upon to hold its own under very adverse conditions. I have never seen any variations from the type, but Baker notes varieties I. virginica (I. caurina, Herb.) and I. placcida (Spach.) as forms with some distinctions of structure and colouring. I have also noticed in foreign catalogues other names, as I. versicolor Krameri. It seems to me useful to note synonyms as warnings against accumulation of plants whose names in catalogues are often so many traps for the unwary. Some dealers even offer the same plants under different names at different prices. Our other common Iris, which is often nearly as thickly sown as Grass in a meadow, is

I. prismatica (I. virginica, Gray; I. gracilis, Bigelow; I. Boltoniana, B. and S.). With its narrow leaves, a foot or more high, and purple flowers, this is a species which is graceful in habit and effect. Allied to I. versicolor, though a separate species and a distinct garden plant, is

I. CAROLINIANA, which was discovered a few years since by W. A. Manda in North Carolina. This has somewhat flexuous leaves, very slightly glaucous, brownish spathe valves and light lavender flowers of fine form. Further south, on the Atlantic coast, is found another beardless Iris,

I. TRIPETALA (or I. tridentata of Pursh). This is interesting to the botanist, as having smaller standards than any of the narrow-leaved kinds of this section (Apogon). It is an attractive dwarf-growing purple Iris, flowering late in the season. While it is hardy here, it does not seem quite satified with our winter climate. After worrying most of the collectors on the coast, I succeeded in securing this from Florida. It is a plant in request among Iris fanciers, and scarcely to be had due from the dealers, who confound it with I. Hookeri (or I. tripetala and I. tridentata of Hooker), which is a Canadian Iris with the habit of I. versicolor. Another southern Iris is

I. FULVA (or I. cuprea), with flowers distinct in colour from any other species of the family, and of a spreading Moræa-like form when open. The form usually in cultivation has flowers of a rather dull coppery brown, but lately *Meehan's Monthly* figured, in a coloured plate, a form with brighter coloration in pinks and browns, so that there are evidently variations of this plant to be found. Beyond the Mississippi to the Rockies we seem to have only one species,

I. HEXAGONA, though this is found also in the Southern States as far east as Florida. I. hexagona makes wonderful rhizomes, nearly round, 1½ inches in diameter and sometimes 2 feet long. Naturally it requires good lateral root room and good supplies of moisture. No Iris has given me greater pleasure this year than I. hexagona var. La Mance, which was discovered last season in Benton County, Arkansas, and has been named in honour of Mrs. L. S. La Mance, the discoverer. This is much superior to the type, and has slightly pendulous leaves 1 inch or more wide and 2 feet high. The stems are spreading, leafy, and bear several two to three-flowered spathes. The flowers are large, with standards and falls both spreading and of a rich blue-purple, shading to white. The styles are light green. The plant in flower is very distinct in habit and most effective and striking. Besides the type, I have also an unflowered variety with flowers of a lighter hue. A friend in Florida has sent me a native form of I. hexagona with white flowers. This rarity should be a great gain, white Irises being the quintessence of floral beauty. Westward, again, there is said by Coulter to be only one species in the Rocky Mountain basin,

I. MISSOURIENSIS (I. Tolmieana).—This is a narrow-leaved kind, with light purple flowers, the falls of which are reticulated. The flowers are small, but it is a vigorous species and rather attractive. Westward again we find a number of species and varieties, which, from a gardening point of view, form an interesting group. The list comprises I. tenax, I. tenuis, I. macrosiphon and varieties, I. Hartwegi, I. Douglasiana and varieties (I. Beecheyana, I. Santa Cruz, &c.), I. bracteata, I. longipetala and varieties.

I. TENAX, a linear-leaved species from Oregon and northward, offers no difficulty in cultivation here and flowers regularly, without special attention, early in the season. Its rather small light purple flowers are attractive.

I. TENUIS I have not been able to secure, and shall be glad if some reader in Oregon would favour me with seed. Judging by its habit, it is probably a plant difficult to establish.

I. MACROSIPHON is said to be very handsome and free-flowered, ranging in colour from yellow through the whites and purples. Mr. Purdy has transplanted this successfully to his garden on the Coast Range, but, of course, his climate is not an eastern one, and the plants rest and grow under somewhat normal conditions. Herr Max Leichtlin has lately re-introduced I. macrosiphon to cultivation from seed, and we are likely to hear more of it.

I. HARTWEGI was first specially brought to my notice a few years ago by an English friend, who is one of the best of amateur gardeners. He had once had it established, but had lost it, much to his regret. There may be others outside of California who have established it, but probably not many. The friend who sent me some plants this spring says: "Remember that they require a dry locality. They never drink a drop of rain from the middle of May till the end of September at the earliest, and they are to be found only on those hillsides where they are drained to perfection; never near a moist or wet spot. I do not recollect having found them on any but dry slopes, and there strong in the sun, and slim and thin if shaded too thickly by Pines, Pinus ponderosa." Strong roots and thin roots have mostly gone quickly to the majority in my garden, though at present there are some survivors under cover and dormant, besides seedlings. It will be seen that such plants are likely to cause a gardener some trouble. If we are to grow some of the Californian and many of the Asiatic plants, it will be necessary to arrange a summer drought for parts of the garden. There is also another little matter which bothers a gardener in growing some of the early-flowering plants—our seasons are sometimes so late that the plants do not move until their natural flowering season is over, and this is apparently prejudicial to their perfection.

I. DOUGLASIANA has several varieties, and Mr. Purdy informs me that he has seen some beautiful natural hybrids with some other species. Of these and I. bracteata I have had little experience beyond losing them one or more times.

I. LONGIPETALA is a species which seemingly requires no special treatment, and has grown here for some years with so little attention that I do not at the moment remember the distinguishing features of its purple flowers.

These notes, which perhaps give a large proportion of negative information, are offered in the hope that observers of our native flora may be induced to notice and collect Irises which may differ from the types, and favour us with notes on the natural habitats of some of the little-known species.—J. N. GERARD, in *Garden and Forest.*

NOTES ON HARDY PLANTS.

Dryas lanata.—It is certainly hard to distinguish this kind from the common octopetala when not in flower, but in the latter state it is just as true that the most cursory observer would know it as a much finer variety as regards the flowers. Moreover, it has the habit (in the case of strong specimens) of flowering freely in the autumn, and the fact of a fine show of bloom at present has suggested this note.

Linaria hepaticæfolia.—This is a pretty little plant with many capabilities. This plant is an instance of that "little and often" care needed by which, and which alone, our rockeries can be kept orderly. I have seen this pretty creeper in one season kill all around it for the space of a yard. This is not the plant's fault, but the gardener's, for we have none too many of its class—creepers with the dense habit close to the surface of the ground.

Silene quadrifida var. pusilla.—Nothing has been, and scarcely could have been, more lovely than this humble plant all the present summer. It began in June to produce its myriads of flowers, and they are opening yet. It may be described as a pigmy S. alpestris, with the elegance that its divaricate hair-like stems may be imagined to impart. The whole plant does not exceed 4 inches in height when in bloom, and the flowers are of the purest white, a quarter of an inch to half an inch across, with the quadrifid feature constant. Culturally, it is neither a miffy thing nor one that runs away smothering other things and coming up where not wished, as some of its genus do. Given a light soil, sandy, and with a few bits of chalk added, it will stand for years in one place healthy and happy. Certainly it is one of the best and most winsome of alpines as a decorative plant.

Rosa Wichuria, or Wichuriana.—At the present time this is a Rose bush to linger over, and yet it is scarcely a bush because of the peculiar habit of disposing its long stems flat on the ground; these are densely clothed with small shining foliage, among which nestle short branchlets of flowers, resembling the white Japanese Anemone close by. For a big rockery it must be a glorious subject. Its hardiness is beyond all doubt. I have grown it three years, and, as I take it, last winter would be a fair test. It then stood on the top of a bit of rockwork simply protected by a few Holly bushes on the north side. It is practically evergreen, which is no mean feature for a Rose employed as indicated.

Primula Forbesi.—Flowering freely as it is now doing in the open air, it is worthy of note; besides, the flowers are numerous and bright, in the way of our native P. farinosa, though the foliage is quite different from that species. It is reputed to be tender. I have not tried it yet, but some of my plants will be available for trial in a favourable corner. It is because the plant is such a pronounced gem and very free-flowering in summer out of doors, that, hardy or not hardy, it is worthy of the extra care of lifting it in the autumn. J. WOOD.

Woodville, Kirkstall.

TUFTED PANSIES.

ANYONE contemplating employing these for the flower garden next season should now secure stock. Nurserymen who make a speciality of them put in cuttings in July and August. These if placed in a sandy soil in cold frames make very useful plants for placing out in beds or borders for spring and early summer bloom, or one and two-year-old plants may be lifted, divided and planted out in a nursery bed for transplanting in December or January, though these months are fully late because of the danger of disturbance by frost. To furnish a glorious feast of bloom in spring and early summer there is nothing like plants put out in the spring of one year and allowed to stand through the winter to bloom the spring and summer following. Such plants are helped by a good top-dressing of some rich soil in autumn, and as they are thoroughly established and have rooted deeply, they make large tufts and bloom grandly. I had such a plantation this season, and in spite of the severe drought the plants stood the strain bravely, greatly helped by a layer of cow manure a foot below the surface. It is astonishing how strong plants will send down roots deeply into the soil in search of such nutriment. A dozen of most useful varieties will be found in William Niel, a delicate rosy pink variety which has been most persistent in flowering all the season, no matter what the weather has been; Ardwell Gem, still one of the best yellows; Goldfinch, Duchess of Fife, Christiana, a fine white; Blue Gem, Lemon Queen, Countess of Hopetoun, Border Witch, J. B. Riding, for its peculiar reddish tint; Rosea pallida and Blush Queen. By way of making a baker's dozen add Sylvia, white, one of the Violetta section. I may also mention a few of the best new and old kinds I have seen this season in their different sections. I can name, of blotched and shaded flowers, Iona, a beautiful flower, which really marks an epoch, the lower petals being blue-black, each having a white blotch at the edge, the upper petals lavender; Craigie, purplish crimson and delicate lavender; Princess Beatrice and Cottage Maid. Of edged flowers, Duchess of Fife, which has a distinct edging of blue on a primrose ground; Border Witch, delicate soft blue, finely shaded (these two are quite at the head of the section); and Amazon, a variety which finds a great many admirers on account of its broad orange-amber belting to a white centre. The best whites are Countess of Hopetoun, one of the best and most useful still; Christiana, and Sylvia. As a purple

self, Archie Grant heads the section, and as a blue, Blue Gown. The finest yellow is undoubtedly A. J. Rowberry, but being new and likely to be scarce for a year or two, it will be high priced for a time; it has an excellent habit and is very deep in colour. Add to these Lemon Queen, George Lord, deep primrose, W. Niel, Rosea pallida, and Blush Queen, blush.

Now is a good time to sow a little newly-gathered ripe seed, taking a box, filling it with a good free soil, scattering the seeds thinly over the surface, adding a slight covering of a fine sandy compost, placing the box in a cold frame, and protecting from heavy rain. By keeping the seedlings in the seed-box all the winter, and planting out in well-prepared ground early in March, such plants will get into fine bloom in May and June, and the raiser will experience a pleasant sensation day by day in watching the seedlings unfold their blossoms. R. D.

Cactus Dahlias.—The monster blooms of these we see at exhibitions may be all very well, but for house decoration one cannot do anything with them where tasteful arrangements are required. The flowers of such sorts as Black Prince, Cannell's Favourite, and several others are much too large. In my opinion it will be better for the raisers of these Dahlias to discontinue doing so altogether, because there is always a tendency for the newer kinds to take the place of older ones, and for the garden and the house we shall be better off with what we have than to increase the number of varieties that have only size to recommend them.—J. C. CLARKE.

Carnations from seed.—Much of late has been written in THE GARDEN on Carnations, and one or two notes have appeared on raising them from seed. Having tried several packets of seed during the last few years, I should like to point out that this way has many advantages in a situation where it is very difficult to get on with Carnations. For several years I obtained plants from the best sources, using every effort to keep up a stock, but in vain. Some kinds positively refuse to grow at all, Mrs. R. Hole and Ketton Rose being examples. Some years ago I began growing Carnations from seed, and although I cannot keep them clean long, they go on much longer than plants raised from layers. No doubt this arises from the seedlings being more vigorous and better able to ward off the spot. In January, 1893, the president of the Carnation Society sent me a packet of seed of his own saving. I sowed it in March in a box in a frame, and when strong enough the seedlings were pricked out in an open raised border, so that I could place a frame over them to keep off the heavy rains. In this position they wintered grandly. In March these were planted out on a raised border in full sun, where they grew away splendidly, giving us a grand lot of blooms for three months. From this packet of seed many of the flowers surpassed those of kinds sent out under name. As I planted them somewhat thickly, the single kinds were removed as the flowers opened. I have now layered many of the best growths; some I have layered into pots, intending to keep them in a cold house on a shelf through the winter.—JOHN CROOK.

PANCRATIUM ILLYRICUM.

THIS truly lovely species is, strictly speaking, the only member of this noble genus sufficiently hardy to endure our winters in the open ground, and that without protection. And seeing this is the case, it is all the more surprising that so good and choice a subject should be so seldom seen among collections of hardy plants. Even in those gardens where hardy bulbous plants for the most part find a congenial home the above plant is rarely seen, and yet there are few gardens that could not provide a suitable home for it. As may readily be seen by a glance at the charming group in the accompanying illustration, this hardy kind possesses flowers of as equal purity and chasteness as the more tropical species. This fact alone should tend to make it at once popular with all who desire to possess rare or beautiful flowers, and who have not the requisite heat at command to grow those species for which high temperatures are essential. This beautiful plant is a native of Southern Europe and one of the most distinct of its genus, a fact fully demonstrated in the illustration, which displays its high decorative value in a charmingly natural manner. The broad, ligulate, and distinctly veined leaves closely overlying each other, as well as their generally sturdy and vigorous constitution, are unmistakable characteristics of this species, and when once seen in good condition it will assuredly fix itself on the memory. In bulbs of flowering size the foliage on first emerging from the earth is for some time erect, but with the uprising flower stem the leaves often assume an angle of 45° or thereabouts, with the lower ones often quite flat on the soil. In this stage the aspect of the plant is of the most distinct kind. It is an excellent plant for the cool conservatory or the winter garden or such like places. Notwithstanding its complete hardiness, the purity of its flowers is best preserved when given glass protection. The plant usually flowers about midsummer, the flower-spikes attaining to about 18 inches high, each umbel containing from six to a dozen of its large white, fragrant, and handsome blossoms. Large bulbs frequently produce two spikes each, and these give a supply of blossoms for some considerable time.



Pancratium illyricum in Corsica. From a photograph sent by Mrs. Robb.

CULTURE.

When grown in the open ground, a position at the base of a west or south-west wall should be given it. In such a position it would be quite an easy matter to make a narrow border into a special home for this and similar things. For example, this Pancratium, together with the Belladonna Lilies and some of the hardy Crinums, such as C. Powelli and C. longifolium, all summer-flowering plants for which a similar treatment would suffice, may be brought together, and thus constitute a most pleasing group. One of the most important items is free drainage. This is best secured by removing the original soil fully 2½ feet deep and placing 6 inches of brickbats in the bottom for drainage. The soil best suited for this bulb is loam, peat, rather rough leaf-soil and a

liberal addition of sand. A soil that is of a clayey nature should be avoided altogether. When preparing the bed, a good layer of cow manure or well-rotted hotbed manure may be placed in the trench at 15 inches deep, or it may be stirred into the trench with the soil at 12 inches deep. The Pancratium should be planted fully 6 inches or 8 inches deep ; the other bulbs named must be planted more deeply, 9 inches to 12 inches at least. The early autumn months are the best for planting, and once well done they may remain for several years ; indeed, the great secret of success when well planted is in letting them alone. Unless the surface of the bed is carpeted with evergreen plants, a covering of short litter or cocoa fibre 6 inches thick or a good mulch of short manure may be given by way of making them more secure. With such a covering, however, Pancratium maritimum may be added as a good companion to those already named. With frame culture the latter retains its foliage, while P. illyricum is deciduous.

These Pancratiums, while somewhat slow in producing offsets, may be raised from seeds comparatively easily, the seedlings attaining to flowering size in from three to five years. In this way a good stock of this handsome hardy bulb may soon be obtained. E. J.

LILIUM SPECIOSUM AND ITS VARIETIES.

I must thank "Delta" (p. 205) for directing attention to the white variety Vestal, which is at present very little known. Concerning Melpomene, reputed to be of American origin, there is no doubt that the form now grown under that name is quite distinct from the transatlantic variety which was raised by the late Mr. Hovey, of Boston, and reported to be a hybrid between L. speciosum and L. auratum. Mr. Hovey himself sent me a bulb in, I think, 1880, but neither in foliage, flower nor bulb could I detect any trace of L. auratum, and the Lily in question turned out to be a good large-flowered form of rubrum, certainly not so dark as the Melpomene of the present day. There are some beautiful well-marked forms to be found among the coloured varieties sent to this country from Japan either under the name of rubrum or that of Melpomene. Some of these latter are very richly tinted ; indeed, there is a good deal of individual differences to be found among them. Out of a number of imported bulbs that I have flowered this season, the greater part consists of the richly-coloured Melpomene and the strong-growing form with somewhat lighter coloured flowers known usually as rubrum superbum, but other kinds have cropped up, though only to a limited extent. Two in particular have attracted notice, the first being the very finest of the roseum section. A suggestion has been made and is now generally acted upon to classify all those with green stems and flower-stalks under the name of roseum, and to regard as rubrum those in which the stems are brown or of a reddish tint. That just referred to as the finest of the roseum section has all the characteristics of roseum, but the flower is far more beautiful than any of the Dutch forms. The blossoms of this are large and the segments reflex in a symmetrical manner, thus forming a grand bloom. The interior of the flower is of a rosy tint disposed in a more regular manner than is usually to be found in those bearing the name of roseum, while it is also particularly remarkable as being with one exception the last of the speciosum group to unfold its blossoms, being in fact later than Melpomene. The exception just referred to is quite a distinct variety, and must be awarded the palm as the latest of all the L. speciosum. In this the stem is more or less tinted with chocolate, particularly on the upper part, while the foliage on the lower portion of the stem is narrower than in some of the others, distinctly channelled, sharp-pointed and dark green. On the upper part of the plant, however, the leaves are broader. The flowers are supported on pedicels pushed out almost horizontally from the main stem, a distinctive feature by which when in bud this Lily can be selected from any of the others. The blooms are not particularly large, but of a good shape and deeply coloured, certainly not so dark as those of Melpomene, but, like that, with a white margin to the petals. These two last-mentioned varieties are, from the lateness of their flowering, very useful Lilies.

As soon as the flower-stems lengthen and the leaves develop, they can be readily selected from the others. Of these two kinds, however, as a rule, only a few make their appearance among the importations of rubrum. Of white varieties, "Delta" does not mention album novum, a variety which sometimes crops up among the bulbs of Krætzeri, from which it differs slightly in the foliage, but more so in the flowers, which are somewhat larger and more massive than those of Krætzeri and not quite so regular in outline. A prominent point of difference is to be found in the anthers, which in Krætzeri are chocolate-brown, and in album novum clear yellow. H. P.

FLOWER GARDEN NOTES.

Frames that have been occupied by layers of Tree or perpetual-flowering Carnations now potted up or by Pinks that are planted out can at once be utilised for other things. East Lothian Stocks sown in boxes in August will soon be ready to handle, and may be pricked out into these frames 3 inches apart each way. The compost prepared for Pinks and Carnations will do very well for them. Late summer-sown Stocks come so early into flower the following year, are so useful for cutting, and make such a fine display right through the season, as to fully merit any attention bestowed on them. In similar quarters may also be inserted cuttings of Antirrhinums, Pentstemons and Phloxes, either in the ground or in boxes, as may be deemed advisable.

Late flowers.—It is not often that one gets such a capital second display on the Phloxes, but after partially taking out the first central flower-spike there was a heavy downpour of rain that thoroughly set the plants on the move again, the development of back spikes and lower growths was rapid, and the season has been at once continuous and well sustained. This practice of prolonging the season by the removal of the first flower-spike, even if necessary at the expense of the flowers, is always advisable in the case of many herbaceous plants, especially where they occupy prominent positions, and it is necessary to carry on the display until the end of the season. One does not always care to sacrifice, we will say, a fine spike of scarlet Lobelia, but when by so doing half a score of smaller spikes are quickly developed, the sacrifice is hardly regretted. The result of a proceeding of a somewhat similar nature may also be carried out at the present time in the case of the dwarf clumps of Chrysanthemum uliginosum. On the ordinary border plants flowering well at 4 feet are much more serviceable than if they were nearly twice the height, and the sturdy habit prevents the necessity of staking or tying. This Chrysanthemum and also such white-flowering Starworts as Aster ptarmicoides, Harpur-Crewe and Purity (especially the last-named) will be found very valuable at this season if white flowers are wanted in quantity for harvest festivals or home decoration. If long branches bearing their large spikes of flowers are cut in various lengths and placed in pots of damp soil, they will mix well with almost any kind of foliage, and the special value of the Starworts lies in the fact that whilst the long branches can be used for bold grouping, all the side shoots will come in for smaller work such as in window-sills, choir stalls, &c. Apropos of the question of foliage for such work, I may mention that if the supply of house plants is somewhat scanty, substitutes can be found in long shoots of the Bamboos, also of the tall Water Reed and the Bulrush.

Herbaceous borders.—The quantity of flowers furnished by Starworts and perennial Sunflowers, to which may be added the late display of Phloxes, is answerable for the fact that September is about the best month on the herbaceous borders, so far, at any rate, as the larger plants are concerned. Note should be taken of the display as a whole at this season to see if any alterations would be advisable—that is, in the different arrangement of clumps to give at once a good variety throughout the borders and a general harmony in the colours. So far as the Starworts are concerned, a mistake is not easily made in the blending or contrast of colour. The chief point is to see that the several varieties are well distributed. Again, another point is to note the behaviour of some of the less known and higher class things with the view to change their quarters if the progress has not been satisfactory. It is not altogether that these are superior as border flowers to the best varieties of well-known species, but considerable notice is taken of them, either because their flowers are unique among hardy plants, or there is something in their constitution which renders their cultivation a subject of interest to the plant-lover. Gentiana acaulis, Heuchera sanguinea, Dracocephalum grandiflorum are cases in point. In connection with some things it may be noted that recommendations as to the most serviceable site must not be taken too literally. A dry sunny border, for instance, should not indicate one that is apt to get thoroughly parched up, and whose dry nature is partly attributable to the fact that great clumps of the most rambling and hungry of herbaceous plants have been located there for many years and drawn all the goodness from the border. There are comparatively few among herbaceous plants that do not like a bit of good soil, although other requirements may include a sunny spot and good drainage.

Daffodils.—The planting of these, whether in small clumps on borders or on a large scale in pleasure grounds, should be pushed forward and completed as soon as possible if not already done. In the short list of good Daffodils to be planted in small quantities on borders I omitted to mention the Gardenia-flowered poeticus, a cheap and at the same time a very useful variety. The different forms of poeticus, both single and double, have a preference for a rather stiff soil—at least I found they did not take kindly to the sandy subsoil in which they were first planted, so they were lifted three years ago and transferred to the front part of a Vine border, where for the last two seasons they have given a lot of flower. If there is a batch of obvallaris in some warm corner, it will be well to put on a mulching of leaves before the approach of frost ; the natural flowering season will be considerably advanced thereby, given an early spell of sharp weather and a break up of the frost in January with little very sharp frost after that date.

Present work.—Certain work in the flower garden must not be neglected because of the expectation of early frost ; we may have the glass so low towards the latter end of the month as to make a clean sweep of most of the flowers, but, on the other hand, sometimes frost is delayed until the end of October, and, with the hope of being thus favourably treated, the removal of seed-pods and dying flowers from Sweet Peas, perennial and annual Sunflowers, Calendulas, Gaillardias, and other things may still continue, and all back flower buds now showing will be developed if there is no frost. If a good batch of Cactus and pompon Dahlias were planted together to furnish flowers for late cutting, a last tie may be given to prevent the breaking of the branches by autumn rains, and at the same time a few tall stakes can be placed at intervals through the border to enable protection to be given easily and quickly if the night is inclined to be frosty. E. Burrell.

Claremont.

Diseased Begonias.—A disease has attacked pot Begonias of both tuberous and fibrous-rooted sections in this neighbourhood. I have noticed a plant or two here and there in former years, but have attributed it to defective drainage or over-watering in the early stages of growth, and as it

only attacked a few plants and did not affect the bulk of the collection, little notice was taken of it; but this year practically the whole of the pot plants have succumbed for this season at least, and even seedlings raised this year, pricked off into boxes and placed in frames away from the other plants, have not escaped, though they grew well at first. The disease is not confined to the collection here, but seems pretty general throughout the neighbourhood, and in one place where hundreds of plants are usually grown there was not a healthy specimen to be seen a month ago. The loss is distressing, as we depend largely on Begonias to keep up a display of colour right up to the Chrysanthemum season, and have never before failed to do this. So far, none of the plants used for bedding have become affected, and it is to be hoped they will not do so, or we shall have to place less dependence on Begonias for filling the beds with brightness through the season, and in spite of weather changes. The first signs of disease are curling of the leaves and a refusal of the flowers to open properly. This becomes more pronounced and the stems then take on a rusty appearance, the leaves and flowers then dropping, the whole growth getting into a state of stagnation, and finally falling away. Till this year the fibrous-rooted section has escaped, but now all our plants of B. weltoniensis, B. nitida, and others have gone under. Can any of your readers suggest a remedy or a preventive? For the better behaviour of plants in the open air I have decided for one thing to grow the pot plants in frames another season and treat them to as much fresh air as may be possible, but I should like to hear of something more certain to prevent a recurrence of the disease than this treatment.—J. C. TALLACK.

CAMPANULA ISOPHYLLA ALBA.

WHEN recently at Mount Stuart, Bute, the residence of the Marquis of Bute, I noticed, among many objects of interest in this magnificent place, that Mr. Heron had planted this Campanula on the verge of his plant shelves in his flowering house, where it was doing well and blooming with great freedom. The plants in bloom on the broad stages running round the sides of the house, for it has a central stage, and which consisted of Begonias, Fuchsias, and such like, were standing upon a bed of fine sand and small gravel. All along the verge Mr. Heron had planted this Campanula and alternately with it a plant of blue Lobelia. Both were doing well, blooming freely, and the effect was excellent. I agree with "E. J." that as a hanging window plant it is excellent, and it can frequently be met with on the costermongers' barrows in the streets, and it is finding its way into many windows. It is the most serious rival the Creeping Jenny has to contend with, as the Campanula makes a good town plant. I am desirous of securing the blue-flowered type. I have two very like it in the size of the blossoms and both of a bright pale lilac, but they are unlike it in foliage. One I have received under the name of C. Barallieri, but the foliage is quite distinct from that of isophylla alba, being darker, more glossy, and the plant is not so continuous in bloom. Then I have what was received under the name of C. fragilis grandiflora, which has a trailing habit of growth, is very free and continuous, but the foliage is downy, and in other characteristics it differs, but that all three appear to run much upon the same main lines I am free to admit. The two blue types differ much more from each other than either does from the white. I find the best practice with this Campanula is to reduce the balls of roots somewhat in the spring and to repot in some good soil, making it very firm in the pot, then standing the plants on a greenhouse shelf. When they have made a free growth and become pot-bound they flower profusely, and require a good deal of water if the plants are exposed to the sun. I found it perfectly hardy last winter and quite unharmed in a cold house, but plants placed out of doors in a slightly elevated spot suffered severely from the effects of the winter; but it must be remembered it was exceptionally severe. The plant can be propagated by means of division. R. D.

FERNS.

SMALL GROWING HYMENOPHYLLUMS.

STRONG-GROWING species of Hymenophyllums are not the only ones deserving the attention of amateurs, for we find among the medium-sized and small-growing kinds some remarkably pretty and interesting plants. Most of these, it may be stated here, succeed best when established on a piece of bare porous sandstone. This is a way adopted most successfully by Mr. Ulbricht, an enthusiastic amateur, of Belmont, Queen's Road, Leytonstone. In every other respect the treatment advocated for strong-growing species applies to medium and small-growing kinds, among which the following are the most distinct and also the best known in collections:—

H. ASPLENIOIDES.—A charming little Fern native of Mexico and Brazil, where it is found hanging down from mossy rocks and trunks of trees. It is readily distinguished by its peculiar habit of growth, and also by the delicate nature of its narrow, evenly undulated fronds, seldom more than 4 inches long, and of a dark green colour and very shining nature.

H. BIVALVE.—The fronds of this distinct species, native of New Zealand, are somewhat broadly triangular, each 4 inches to 6 inches long, 2 inches to 3 inches broad, and have the stalk of their leafy portion only slightly winged above, while that of their divisions is winged throughout.

H. CHILOENSE.—A real gem among Hymenophyllums. Its pretty little fronds, seldom more than 2 inches long and 1 inch broad, are triangular, of a dull green colour, with very conspicuous dark veins covering their whole surface. It is a small, pendent tufted species, native of Southern Chili and Chiloe, where it is said to form dense carpets over trees and rocks; it has a great aversion to being watered overhead.

H. CRUENTUM.—A most distinct and very interesting species, quite peculiar in its habit of growth and general appearance, inasmuch as its delicately transparent, seaweed-like fronds are simple, broadly spear-shaped, and slightly undulated. They are 3 inches to 5 inches long, 1 inch to 1½ inches broad, and borne on slender naked stalks, and are most interesting through their beautiful venation, their simple and prominent veins reaching from the mid-vein to the margin at regular intervals. The brownish-rosy colour of the old fronds, which remain on the plants for a long time, greatly adds to the beauty of this plant, which is a native of Chili, especially of the province of Valdivia, where it is found growing on trunks of trees.

H. DICHOTOMUM.—This is a remarkably pretty dwarf-growing species, which delights in sending its tiny rhizomes through a coating of Moss, covering either a piece of rock or a block of wood, or Tree Fern. It is a native of Chili and Juan Fernandez, and is particularly striking through the beautifully crisped and transparent characters of its finely-divided foliage, by which it can be distinguished at first sight from all other species in cultivation. Its upright-growing little fronds, 4 inches to 6 inches long, inclusive of their stalks, are divided into crisped segments that are sharply toothed or torn at the edges.

H. MAGELLANICUM.—A pretty little species, also known as H. attenuatum. It is a native of Chili, Chiloe, and the Organ Mountains, and of a peculiarly rigid, upright habit. It fronds, which are very impatient of water on their surface, are 3 inches to 6 inches long, 2 inches to 3 inches broad, three times divided nearly to the midrib, and borne on upright stalks 2 inches to 4 inches long, margined on each side with an undulated and crisp wing.

H. MULTIFIDUM.—This very elegant species, with fronds 2 inches to 6 inches long and 1 inch to 3 inches broad, three times divided nearly to the midrib, with narrow segments, and borne on wiry, naked stalks 2 inches to 4 inches long, is a native of New Zealand and the Pacific Islands.

H. NEESI.—A small-growing species, native of Java, Ceylon, Fiji, Borneo, and the Philippine Islands, produces small egg-shaped fronds about 2 inches long, three-quarters of an inch broad, and three times divided nearly to the midrib. These are borne on slightly winged stalks, the wings and leaflets being much crisped.

H. PECTINATUM.—No description, however complete, can do justice to the elegant appearance of this beautiful species, native of Chili and Chiloe, which, on account of the essentially distinct character of its foliage, is of great interest. The greyish green colour of its fronds, which measure from 3 inches to 6 inches in length, and are only once divided to the midrib, as well as the beautiful and conspicuous venation of its pinnules, which are restricted to the upper side of the pinnæ only, are characters not shared by any other known species.

H. RARUM.—A close-growing species, with fronds of a somewhat flaccid nature, 2 inches to 6 inches long, twice divided nearly to the midrib into forked pinnæ, showing two or three deeply-cut segments on each side. This species is widely distributed, being found hanging from trees in Chili, Cape Colony, and Mauritius, as well as in Tasmania and New Zealand, where it covers trunks of Tree Ferns with its pendent fronds.

H. TUNBRIDGENSE.—This and the following are the two representatives of the genus found wild in the British Isles. The Tunbridge Wells Filmy Fern, as this species is popularly called, though one of the smallest growing, is also one of the most interesting of the whole genus. It is a compact, elegant little plant, seldom exceeding 3 inches in height and forming dense carpets, often covering large surfaces of rock or stone. We find it first mentioned by Petiver in his "Musei Petiverani Centuria Prima" (published in 1695), under the name of Darea tunbridgensis minor, as having been discovered by Mr. Dare, a botanist of the seventeenth century. This is a very cosmopolitan plant, being found in Ceylon, on the Himalayas, in Mauritius, Venezuela, Jamaica, and the Peruvian Andes, also in Madeira and the Azores; while in the British Isles, although it has very nearly, if not quite, disappeared from the vicinity of Tunbridge Wells, it is to this day to be found in Westmoreland, in Ireland, in Wales, and in Scotland, especially in the neighbourhood of Oban.

H. UNILATERALE, or, as it is more commonly called, Wilsoni, is closely related to H. tunbridgense, yet sufficiently distinct to range as a species. It is altogether of a more rigid habit and its foliage is of a much darker colour, though remarkably transparent, its pinnæ being curved and repeatedly divided, but not fan-shaped. Its presence is not limited to the British Isles alone, where it is more widely spread than tunbridgense, for it is also reported from Norway, South Africa, Tasmania, Chiloe, &c.

H. VALVATUM.—A very distinct and charming species, native of Nicaragua, Martinique, Guadeloupe and the Andes of Colombia and Peru, where it is found growing on trunks of trees, sometimes covering them entirely. Its drooping fronds, each 4 inches to 6 inches long and 2½ inches broad at the base, are of an exceptionally dark green colour and three times divided nearly to the midrib, with segments on each side of it conspicuously waved. Although not of a hairy nature, this species greatly dislikes water on its delicate and very transparent fronds.

Other species of dimensions similar to the above are known, such as axillare, from the West Indies; Bridgesi, from Chili and Chiloe; crispum, from Tropical America; denticulatum, from Java; falklandicum, from the Falkland Islands; gracile, from Bourbon and Mauritius; pumilum, from New South Wales; sabinæ-

folium, from Java ; Simonsianum, from Sikkim and Khasya ; tenellum, from Ceylon ; undulatum, from Mexico and Peru, &c., but few of these are in cultivation in this country.

With the exception of H. scabrum, all the species above described have smooth foliage, but there exists also a section comprising plants which are very interesting and most beautiful on account of the woolly or hairy nature of their fronds. Most of these are of pendulous habit and grow best on partly decayed wood and on Tree Fern stems ; these should never be wetted overhead. The following are the most attractive and best known in cultivation : —

H. æruginosum. — This distinct and well-marked species, native of the island of Tristan d'Acunha, where it is found hanging from rocks and trunks of trees, has pretty fronds each 3 inches to 4 inches long, 1 inch to 2 inches broad, three times divided half way to the midrib, which is winged in its upper part. Their pinnæ, which at all times are covered with a whitish down, are are often much imbricated and the lower ones are frequently fan-shaped. The pubescence on the fronds in a young state is silvery, but with age it assumes a brown or tawny colour.

H. ciliatum.—This species, which is particularly fond of running its slender, thread-like rhizomes into a piece of Tree Fern or of partially decayed wood, is somewhat similar in habit and in general appearance to the better-known chiloense, but is of much larger dimensions. Its fronds, each 2 inches to 6 inches long and 1 inch to 2 inches broad, have the stalk of their leafy portion broadly winged throughout and ciliated, and their pinnæ and pinnules are hairy throughout, especially along the margin of the fronds. It is also known as H. Plumieri, and has a very wide range of habitat, being found in the Eastern Himalayas, in West Tropical Africa, in Mauritius, Madagascar and Bourbon Islands, and common in Tropical America, from Cuba and Mexico to Chili and South Brazil.

H. elasticum.—A pretty plant of a woolly nature, closely allied to the better-known hirtellum, and a native of the Seychelles, Mauritius and Bourbon Islands, where it is said to be plentiful.

H. exsertum.—A species of medium growth, found on the hills throughout India from the Himalayas southward to Ceylon. Its oblong, spear-shaped fronds, seldom more than 6 inches long and 2 inches broad, have the stalk of their leafy portion winged above and throughout, and more or less densely clothed with deciduous hairs of a rusty brown colour.

H. hirsutum.—This distinct and extremely delicate looking species, which succeeds best on a block of wood and in an upright position, is a native of Tropical America, from Cuba to South Brazil. Its pretty fronds, each 2 inches to 6 inches long and 1½ inches broad, only once divided nearly to the midrib, are of a flaccid nature, often pendulous, of a pale colour, and hairy over the surface.

H. hirtellum.—A very pretty delicate species with pale green fronds, each 3 inches to 6 inches long, 2 inches to 3 inches broad, three times divided nearly to the midrib, and clothed all over with soft white or tawny hairs, and borne on erect round stalks sometimes 4 inches long and of a woolly nature.

H. lineare.—This very distinct species, of a particularly hairy nature, is also known as H. elegans. Its pendulous and very slender fronds, each 3 inches to 8 inches long and a little more than 1 inch broad, of a flaccid texture, are divided quite to the midrib, their pinnæ being deeply cut into single or forked linear segments, with margin and surface densely hairy. It is a native of Tropical America from Jamaica and Mexico to Brazil and Peru, and occurs also in Mauritius.

H. obtusum.—A small-growing species with spear-shaped fronds, each seldom more than 4 inches long, three times divided nearly to the midrib, and of a particularly woolly nature. It is a native of the Sandwich Islands.

H. sericeum.—This species, native of Tropical America, from Cuba and Mexico to Peru and Brazil, is undoubtedly one of the most remarkable of the hairy kinds in cultivation. Its splendid fronds, which are exceptionally long and comparatively narrow, being sometimes 2 feet in length and seldom more than 2 inches broad, are once-divided nearly to the midrib and of a pendulous habit. They are produced in such abundance from thin, woolly rhizomes as to quite cover the shady rocks upon which in a natural state this species grows apace, and are rendered very attractive by their pinnæ, which are sometimes simply notched and sometimes divided more than half way to the midrib, being covered with a tawny and dense silky down, which in its young stage is of a peculiarly light or silvery hue. It thrives best on a piece of sandstone or any other porous stone over which its tiny rhizomes can run freely, without, however, clinging to it, and should be held in an upright position.

S. G.

Sowing Fern spores.—The article on page 204, in which some curiosities of Fern raising were dealt with, was of especial interest to me, as the experience of your correspondent was in many respects the same as my own, particularly with regard to the appearance of a crop of seedlings of some kind not previously grown. Aspleniums (that is, the greenhouse and stove kinds) are not mentioned in the article in question, but they may be classed among those that cannot be depended upon to reproduce themselves from spores. Concerning the length of time over which spores retain their vitality, I may mention that I sowed a quantity of spores of Dicksonia antarctica taken from a herbarium specimen twenty years old, and they grew as freely as if they had been freshly gathered. Where just one sowing of Ferns is made during the year the spring is the best time for the purpose, but the finest spores can, as a rule, be obtained in the summer and autumn, and if they are then gathered, wrapped up in clean paper, and stored away in a dry suitable place, they will grow as readily when sown in the spring as if they have been just gathered. The soil used for the purpose should be thoroughly baked beforehand in order to destroy all signs of life, otherwise the surface is often quickly overrun with a creeping Moss-like growth which will choke the Ferns. Pteris tremula is particularly liable to decay while still in its earlier stages, and to prevent this the growing spores must be pricked off in little clumps.—H. P.

THE MANCHESTER BOTANIC SOCIETY AND ALLOTMENTS.

Permit me to bring under the notice of your readers the initiation of a forward movement in relation to this most important subject. Its object may be described as to assist rural effort in connection with the cultivation of the soil. It is well known that during the last few years a very large number of persons have become tenants of small allotments in the neighbourhood of large towns. On the 5th of last month Mr. Gladstone, speaking upon this subject, said : "There never was a period in the history of this country when rural effort in relation to the soil deserved greater support, and those who render help in this direction are public benefactors." The council of this society propose to hold an annual exhibition in the Old Trafford Gardens on a very large scale of the productions grown by the tenants of small holdings, at which prizes will be awarded for the fruits, flowers, vegetables, poultry, cheese, butter, &c. brought forward. Prizes will also be given to the growers of window plants in our large towns. The counties embraced within the sphere of this effort will be Lancashire, Cheshire, and Derbyshire. We are all familiar with the old saying that "the hope of reward sweetens labour," and there can, I think, be no doubt whatever that this special effort will be the means of stimulating the poorer classes of society in their endeavours to excel in producing flowers, fruits, and vegetables. The council are of opinion that it is the proper and legitimate work of the society they represent to introduce and carry out this project. In order hopefully to inaugurate this important scheme in a comprehensive way, an annual outlay of £200 will be necessary. To meet this expenditure a special fund is being established, and it is hoped that £5000 will be raised for this beneficent purpose. It may be added that a donor of £25 to this fund will become a life member, or be entitled to nominate one. Knowing that the late lamented Prince Consort forty years ago took a lively interest in this subject, I took the liberty of bringing the matter under the notice of Her Most Gracious Majesty the Queen, and had the honour of receiving the following reply : —

Balmoral Castle, September 2, 1895.

Dear Sir,—I am commanded by the Queen to enclose a cheque for £25 as a donation towards the purpose referred to in your letter of August 21. I am, dear sir, yours faithfully, Fleetwood J. Edwards.

Since the receipt of this letter, and as the result of several letters I have written to ladies and gentlemen interested in the subject, I am pleased to state that nearly £1000 have been promised. A general appeal will shortly be made to the inhabitants of the districts concerned, together with the list of the donors, and it is hoped that the result will be commensurate with the importance and beneficence of the undertaking.

Bruce Findlay.

Royal Botanic Gardens, Manchester,
September 19, 1895.

Public Gardens.

TRAFALGAR SQUARE AS A GARDEN.

This well-known open space has been called the finest site in Europe, and it most assuredly is the focus-spot of London to-day, and, as such, deserves more attention from a decorative point of view than it at present receives. It is true that a beginning has been made by the adding of a strip of cool, green turf and a few scattered specimens of exotic plants immediately in front of the National Gallery, but the attempts are very half-hearted and quite unworthy of such a magnificent position. What is wanted is more green turf and a few bold groups of Palms, Musas or Bamboos, and some Water Lilies, Reedmace and other aquatics in the now bare water basins. The main point, after securing green sward, is the bold and simple arrangement of the plants. As a rule, there are two or three times too many flowers and plants used in even the best of our London parks and gardens. There are too many flower-beds, and these are, as a rule, too near together, so that there is no breadth or repose. In several London parks the other day, while admiring the quantity, quality and variety of the exotic plants and flowers therein employed, I was strongly impressed with the absence of the best taste in their arrangement or disposal. There is no good grouping there. Palms, Dragon trees, Bamboos and Bananas are dotted singly and at equal distances on the grass in all directions, here a Palm and there a Banana, so that instead of one seeing a series of separate effects or pictures, the result is constant repetition ; you are wearied by seeing the same plants again and again. To simplify and organise this "dot-and-carry-one" system I would suggest that bold groups of Palms, Dragon trees or Tree Ferns, or Bananas and Bamboos, be formed in suitable sheltered positions. By thus making bold groups of one type of plant-form or beauty;

much more than is at first apparent would be gained. Labour and other expenses would be saved in the necessary watering and keeping of these groups as so arranged. The groups would naturally be placed so as to have a background of dark trees or shrubs, and by concentrating or focussing the plants into natural groups, greater breadths of cool, clean sward would be secured. As it is, all our public parks and London gardens possess a rich and healthy profusion of flowers, but in nine cases out of ten half the flowers properly and simply arranged would yield far better results. The Grass also deserves to be fed and kept far better than it is to-day in the parks, and those responsible might with advantage study the College Garden lawns at Oxford or Cambridge.

The great difficulty is that good gardeners are not always, or even often, artists as well, and this artistic feeling is what is especially wanted in our public gardens. It is a question for the authorities answerable for the beauty of our public places whether good and costly materials shall be more than half wasted every year because so ill-arranged. The whole art of artistic grouping is explained in Ruskin's "Elements of Drawing," so that he who runs, even, may read, but excellence in the art itself is proverbially rare. The main thing is to be simple and strong, *i.e.*, make a boldly graduated group of one beautiful thing in a suitable place. A group should be a focus spot—a picture with a good background on which the eye can rest in pleasurable peace. The eye can rest on a broad lawn of cool, well-kept Grass, but these grassy glades are too often dotted over with exotic plants in all our parks, so that the eye simply wanders from one plant to another in bewilderment.

The principle is the same everywhere, but let us remove the reproach that rests upon us with regard to Trafalgar Square. It is the one point in London most deserving of careful and beautiful adornments, and it really ought to be the one place in London for exhibiting the highest garden art in all its perfection. We may never rival, nor would the attempt be wise to imitate, the Oleanders and Pomegranates in tubs, the Orange trees and Myrtles of Southern Europe, but at least it is possible for us to make Trafalgar Square at least during the summer months a place of Palms on cool, velvety turf, with water plants of beauty and variety in the now bald and bare basins. For one person who sees our great parks and public gardens, there are a thousand from all the countries of the world who pass to and fro through this noble square. Let us make of it in reality a place of victory and show that garden art can really triumph over stony death and ugliness. F. W. BURBIDGE.

RAILWAY STATION GARDENS.

ONE of the richest and prettiest collections of decorative plants I have seen in a railway station may now be seen at Kingscote, on the London, Brighton, and South Coast Railway. The glass-roofed verandah is literally a greenhouse filled with well-grown flowering plants, such as Pelargoniums, Fuchsias, Petunias, and delicate Ferns, including some pots of Maiden-hair as dark green and as healthy as it is possible to be. A week or two ago the old red Fuchsia fulgens was very handsome, seven or eight plants of it being in full bloom, and the creeping Fuchsia procumbens from Australia is also luxuriant. Plants of Sedum Sieboldi and Campanulas, blue and white, and pendent Ferns fill the corner brackets with their soft flowers and leaves. Tropæolum tuberosum is very graceful, flowering freely on one or two of the pillars, its vivid orange-scarlet blooms set off by its glaucous foliage.

At one end of the platform over a sunny door a plant of the old Box Thorn, or the Duke of Argyll's Tea Tree, is fruiting freely, its slender stems hanging down laden with fruit nearly as large as Damsons, but of a shining scarlet colour. This plant (Lycium barbarum) is one of our most common hardy shrubs, but it is, as a rule, a weedy, unattractive thing, choking up hedges or waste corners with its shoots and leaves. Here at Kingscote, however, the shoots are gracefully rampant and, freely laden with flowers and showy fruits, they form quite an effective addition to the place. Well grown on warm soil and trained in full sunshine on a bit of spare wall, this old shrub may be found far more deserving of culture than is now generally supposed to be the case. Even some of the Kew Garden officials were delighted with this Box Thorn fruit as seen here the other day, and were glad to carry some away for further study. One little fact pointed out to me by Mr. Ward, the stationmaster, was the avidity with which the wasps devoured the ripe fruits of the Lycium, and, judging by their ravages, it is to be hoped they will not extend their attention to the botanically allied fruits of the Tomato, of which there is a very heavily cropped row in the stationmaster's kitchen garden. Celery also is very well grown, and vegetables and fruit trees alike look luxuriant and productive.

Kingscote affords a capital object-lesson for those who believe that gardening might be more generally adopted at railway stations, but of course a great deal, if not almost everything, depends on the individual inclinations of the master in charge. This is shown by the startling variations in decorative treatment adopted at different places. At one station herbaceous plants, at another bedding plants, or, again, Roses and other flowering shrubs are employed, all or any of which are far better than the clinker or shell rockeries, or the cockle-shell names of the stations even yet to be seen here and there on nearly all lines.

A good and simple use of the best and most suitable hardy shrubs and herbaceous plants is perhaps as good as anything with which to set off to advantage most station gardens. In some places Ivy, Wistaria, Passiflora, Ampelopsis, Clematis and other good wall climbers are most suitable, root space being limited. On wide warm banks Gorse and Broom, Laburnum, Bladder Senna, Lilac, and Philadelphus may be employed, while the most sheltered and level spots richest in soil may yield the best of Strawberries and early vegetables. I know one station embankment near a signal box in the midlands where an employé planted Strawberries and Whinham's Industry Gooseberries by the hundred, and he now makes a nice little addition to his salary by his thrift and foresight.

One charm about these gardens at or near railway stations is their variety; no two are quite alike, and of course in no two are precisely the same methods of treatment desirable. It is this dissimilarity in soil, shelter, area, aspect, and suitability that makes any gardening organisation so difficult on any railway. Perhaps the best plan would be for each railway company to offer prizes (as some have done) for the best kept plots on their respective lines. The judging of such diversified plots and variable cropping would of course be difficult, but perhaps not much more so than in the case of ordinary allotment gardens in places like Norwich or Nottingham.

Even now, under desultory management, the gardens at many, even if not most, of our railway stations are very beautiful, and photographs and descriptions of the best known examples would doubtless be very acceptable and interesting to all who are fond of the pleasant byeways of our garden craft. In any case the station at Kingscote is a good example of the cheerful results attainable under the peculiar structural conditions there available. F. W. BURBIDGE.

The gardens at Versailles.—A friend writing from Paris under date September 23, and who has lately visited these gardens, says: "Yesterday I was at Versailles to see the *grandes eaux* play. It was my first visit, and the whole place struck me as being false, the keynote being the fountains, which could only play on certain days because there was not water enough otherwise. The enormous expense of keeping up the place struck me too, clipping all those mangy Yew trees and preventing the alleys of Horse Chestnuts from arching over the paths. The gardens are ugly, the colours of the beds dreadful, and the acres of bare, dusty and unkempt gravel walks make the place a literal eyesore. It is tawdry just as a ball-room is after a ball, and must have been exceedingly ugly when Louis XIV. lived there, and there was even less shade than there is now. Place for place, both of a wretched kind, Caserta seems far finer; the perspectives are longer, the palace has finer lines, all straight, and the gardens are effective from their huge size, which those of Versailles have not."—B. J.

NOTES OF THE WEEK.

Rose La France is one of the best of autumn-flowering Roses. I lately saw several standards flowering almost as profusely as one could expect to find them in June in a sunny forecourt garden close to Southampton.—E. M.

A fine Sunflower.—Mr. J. Bowler, of Ash Vale, Surrey, has just brought us a Sunflower of great size. The diameter of its seed was 18 inches, whilst the extreme diameter of the flower from tip to tip of the petals was 24 inches. The plant was 11 feet high, and only bore one flower.

Starworts from Ireland.—From Newry Mr. T. Smith sends us a gathering of Starworts which are charming in these fine autumn days. Madonna amongst them is the best white we have yet seen, as much superior to A. Purity (also raised at Newry) as that was to all previous white kinds.

Lilium nepalense.—We have received from M. L. Van Houtte père, Royal Nurseries, Ghent, under the name of L. neilgherrense some very handsome flowers of this beautiful Lily, of which he says there is quite a batch in flower in the open. Lilium nepalense was figured in THE GARDEN, January 19, 1889, and L. neilgherrense, April 18, 1885.

Floral decoration of railway stations.—To encourage the cultivation of flowers at the railway stations on the Midland Railway Company's system, that company offered £200 in prizes among their station-masters, covering nearly 2000 miles of rail. There were upwards of 200 entries for the competition, and the first prize has just been awarded to the station-master at Matlock Bath.

Chrysanthemums of the Mme. Desgrange type are now very fine in the Zoological Gardens, doubtless favoured by the fine autumn. The rich yellow G. Wermig we never saw finer than it is here, entirely filling one bed and the plants a perfect mass of bloom. It is much better where there are many beds to devote one or two of them to later flowers, such as this, than to fill them all with summer blooming plants.

Pentstemon antirrhinoides.—We have received flowers of this rare and pretty Californian Pentstemon from Mr. James, Woodside, Farnham Royal, Slough. They cluster in threes or more, and their clear rich yellow colour and sweet scent are very precious. It is wiry in growth, with small leaves. Seeds of it were sown last spring and the plants are now in bloom, but we doubt much if they would go through a severe winter unless on a very light soil and in a warm spot.

Tecoma Smithi, of which we gave a coloured plate in THE GARDEN of July 13, is again flowering in the No. 4 house at Kew. In this we have a really useful acquisition to the limited list of autumn-flowering greenhouse plants. Plants

little more than a foot in height are crowned with a fine truss of yellow and orange-red flowers. Its origin and treatment generally were alluded to when the plate appeared.

The Potato harvest.—In the extensive Potato-growing districts of Lincolnshire and the Fens the work of lifting the tubers has commenced. There is a larger acreage this year than usual, and the crops give promise of good results. Disease has already been noticed amongst some of the delicate varieties, but this does not prevail to any serious extent. Those tubers which have already been lifted are of good size, and free from disease.

Carnations in Scotland.—We were pleased when travelling through Scotland to see many beds of splendid Carnations in full bloom. At Carron Lodge, Stonehaven, a town on the sea-coast, near Aberdeen, the plants were in full beauty. One mass consisted of the old Clove, from layers planted this spring, and in another bed the varieties were mixed, none more beautiful, however, than the pure white kind Mrs. Muir.

Gladiolus brenchleyensis in Scotland.—This is far more beautiful often in Scotland than in the southern English counties. When walking about Stonehaven a gleam of colour seemed to light up some of the cottages, produced by a line of this Gladiolus in the narrow borders underneath the windows. The corms are never lifted, but each year grow up and blossom in a way that we should like them to do more consistently in England.

Hydrangea at Saltram, Devon.—The Earl of Morley sends us photographs of two plants of Hydrangea paniculata grandiflora which are growing in an open border there. The panicles are unusually fine, especially in the photo No. 1, measuring in some cases 20 inches to 21 inches in length. The plants are cut down to two or three eyes every spring. They are growing in a moist border, where the Iris Kæmpferi and Spiræa palmata also flourish.

Cereus triangularis, which is trained up the rafters in the Cactus house at Kew, now bears several fine blooms and buds, and those who care for these flowers should see it. The buds, nearly 9 inches in length, expand into flowers a foot or more in diameter, yet so refined in colour that there is no suggestion of coarseness. The sepals are sulphur-yellow, the many petals creamy white, whilst the centre of the flower is filled with a graceful mass of slender yellow anthers.

Aloe africana, now flowering in the succulent house at Kew, is a striking species. It has a head of spiny leaves on a long stem 4 feet or more in height, and a flower-spike that stands up erect, and so much resembles that of a Kniphofia, that, if detached and only the flowering portion was shown, it might easily be mistaken for this last-named plant. The buds are orange-yellow, and open into sulphur-coloured flowers with long exserted anthers of a bright orange-red shade.

Chenostoma hispidum and Hypericum empetrifolium in one of the houses at Kew, arranged with the bright berry-bearing Rivina humilis, make a pretty group. The first named is a dwarf, close-growing plant, with rich, fragrant foliage, the little bushes bearing numerous tiny white flowers. The Hypericum (of about the same stature) is covered with spikes of yellow bloom, and the Rivina, with its branched heads, gives height and brightness to the group.

The Dove Orchid (Peristeria elata).—With new and, in some cases, remarkably beautiful hybrid Orchids now appearing so frequently throughout the year, there is a possibility of some good old kinds being forgotten, or at any rate put on one side to make place for one or other of the recent acquisitions. It is to be hoped this will not be the fate of the Dove Orchid, whose form of flower alone shows the aptness of its popular name, and, besides, its flowers come during the late autumn days, which is a quiet time for Orchids generally. We were reminded of the beauty of this old species by seeing a plant in Messrs. Veitch's nursery at Chelsea carrying two fine spikes, each more than a yard in height and bearing about a score of the bold, handsome ivory white flowers.

A scented Fern (Lastrea fragrans).—When a scented Adiantum was first brought out, not a few were sceptical as to the existence of this unusual trait in a non-flowering plant, above all among Ferns. In the Adiantum the scent is rather weak, but in this Lastrea it is as powerful and delicate as in the sweetest Rose. It is a tiny plant, its fronds less than 3 inches in length, and a plant with about a dozen of them was growing in a 3-inch pot. It is a native of Jamaica, and consequently not hardy, but may be grown in a cool greenhouse. We noticed this lately in Messrs. Veitch's nursery at Chelsea.

Verbena venosa.—This old plant used to figure prominently in summer bedding arrangements a number of years back, but one does not often see it now. It comes in particularly bright during autumn, giving welcome colour when most summer things are on the wane. Mr. Young still uses it in the Zoological Gardens, and its effect was very good there recently in two beds, where it had been planted in association with fine-foliaged plants and the French Marigold. It is also used with good effect on the Victoria Embankment. Such a valuable autumn flower as this should not be lost sight of.

Crocus speciosus var. Aitchisoni.—The above named is one of the finest and largest flowered of all the autumnal-blooming Croci, and has bloomed beautifully with me during the past week. Its colour is much lighter in shade than that of the type form, and the flowers are also larger and open better. The petals are most distinctly and beautifully veined. It is as yet, I believe, a rather scarce and comparatively expensive bulb, but as it seeds very freely, the seed-pods coming up with the foliage in the month of March or April, it should soon become more plentiful and easy to obtain.—W. E. Gumbleton.

Apple trees in bloom.—I wish to corroborate what I see published in The Garden in respect to the extraordinary produce of Apples this year. Besides the produce, the weather has been the cause of a very abnormal state of bloom development. Numbers of young trees are now in full flower and some have fruit and bloom together. This feature is very unusual. What is more extraordinary still is that young trees propagated last month by budding have developed bud growth very rapidly and the buds have come into bloom as well.—B. Wells, *The Fruit Nurseries, Crawley.*

Lagerstrœmia indica.—The treatment suggested by Mr. J. Lowrie in The Garden of February 10, 1894, appears to have been adopted at Kew, and with success, as there is a large plant of this beautiful Indian tree now flowering profusely in the No. 4 house there. It is planted out in one of the beds and has evidently been hard pruned, which Mr. Lowrie said in the article referred to might induce it to assume a comparatively dwarf habit without loss of bloom. The plant at Kew is most profuse, each of its shoots being terminated by a many-flowered cluster of delightful blossoms which in colour resemble those of the pink Oleander.

Eucharis amazonica.—With reference to the illustration of Eucharis which appeared in our last week's issue, Mr. W. G. Turbutt sends the following note as to the mode of cultivation: "The Eucharis plants were treated by my gardener as follows: Temperature 65° to 70°, soil consisting of rich loam two parts to one part of leaf-mould and manure, adding a little charcoal. Avoid repotting. The plants shown in the group had not been potted for twelve years, but were always surfaced with sheep manure 3 inches deep. After giving them six weeks' rest after flowering (during which time they had a little water), and when they were starting again into growth, they were watered constantly with farmyard manure water, occasionally diluted as the flower-spikes appeared. They were never allowed to become thoroughly dry after they flowered."

Cantua dependens is a pretty plant for a large conservatory or greenhouse. It does best trained up a pillar or, as at Kew, on a trellis where it will get an abundance of light. It is still in bloom in one of the houses at Kew, and this fact indicates its long flowering season, as it usually commences to bloom in the early summer months. The long tubular flowers, disposed in pairs or clusters of three, are of a bright shade of clear rosy carmine at the mouth of the flower, but the tube is of a distinct orange shade. It is a native of the Peruvian Andes and does best in a cool house, but there is little doubt it might be grown in the open air in not a few southern and western gardens if trained on a wall, as, for example, at Offington. A good plate of this plant was given in The Garden of September 12, 1885.

Some new Caladiums.—Several of this season's new Caladiums were still beautiful with fresh and lovely leaves in a variety of tints when we saw them recently in Messrs. Veitch's nursery at Chelsea. The following were especially worthy of note: Her Majesty, which has leaves of an extra light green colour, suffused with a silvery hue and shading to a soft pink with age, old and young leaves alike distinctly attractive in tender and delightful shades. Sir Henry Irving obtained an award of merit early in the season as another welcome variation from the prevailing tint that most predominates among Caladiums. Its leaves have a white centre, which fades into light green margined around the edge with a much darker shade of the same colour. Lady Mosley is distinct, having bold leaves of a light red colour, the leaf veins standing out being of a much deeper red hue, whilst a narrow well-defined margin of green adds to its colour attractions. Sir Julian Goldsmid has leaves of a deep red colour marbled with white, whilst the margins are well defined by a bronzy green tint. Mrs. C. J. Pierpont Morgan is also noteworthy, with pretty leaves varied in a soft and refined manner.

Begonia metallica and B. echinosepala.—Some fine specimens of these between 5 feet and 6 feet high constitute a most charming group at the present time in the No. 4 greenhouse at Kew. The plants in question are simply laden with flowers, which in colour are soft pink and white, and therefore most pleasing. In the case of the latter species the papillose sepals are very singular, forming, as it were, a spiny fringe to the flowers. This in the mass has a distinctly pretty effect. Such kinds as these are deserving of far more attention at the hands of gardeners, and being especially suited to the cool conservatory and greenhouse should be in demand. The charming sprays of their flowers in specimen glasses should also meet with approval, and being produced in such numbers would prove most helpful. It is impossible to describe the almost unique effects that may result from a careful use of some of these free-flowering summer and winter-flowering Begonias, and particularly is this true for home use. That such plants should be lost sight of is a matter for surprise, as it would be difficult to equal them from a decorative point of view. Of course, it would be easy to get quite small plants, though age with these seems to favour their more free flowering.—E. J.

Hardy flowers in Regent's Park.—In looking round to see what colour-beauty was visible from hardy flowers of the present time, we were delighted to find in Regent's Park a picture of present-time flowers that in colour effect was as good as anything we have seen all the year. The best and most artistic of summer bedding is poor and ineffective at the present time, be the weather ever so favourable, as indeed it has been of late, yet it seems absurd to be told in these glorious autumn days that one has come too late to see the flowers at their best. Gardens might always be fresh and gay with a picture that changes with the passing weeks and months. The border in Regent's Park is about as perfect a representation of September flowers as we ever

saw in a public park, and with its sweep of turf in front and mass of shrubs behind forms a picture that must be seen to be appreciated. Helianthus multiflorus was to be seen in several good groups, and as a foil to its brightness came the delicate tints of the Starworts, Robert Parker among the tall ones and Aster acris in dwarfer growth. Rudbeckia speciosa and Sedum spectabile gave a charming variety, whilst early Chrysanthemums, Zinnias and the old pot Marigold were additional features of less prominence. Such autumn pictures are all too seldom seen in our parks and public gardens.

Lycoris aurea.—This remarkable and handsome bulbous-rooted plant is now in flower in No. 4 greenhouse at Kew. In the rich orange-yellow of its large funnel-shaped blossoms there is a distinctness which alone gives value to the plant. The peculiar shade of its flowers is by no means common; indeed, for the nearest approach to it in point of colour one has to refer to the newer forms of the Montbretias, and even then we are minus the richness so noticeable in the above plant. Perhaps a more fitting description for this Lycoris would be to call it a golden Amaryllis of a type midway between formosissima and belladonna. In the specimens now flowering at Kew the flower-spike, which appears before the leaves, is nearly 2 feet high. Other spikes are in various stages of growth, so that its beautiful flowers may be admired for some little time longer. The bulbs are in pots of about 6 inches across, and to all appearance the plants are easily accommodated. Being a native of China, it may be of doubtful hardiness, unless in warm and favoured districts, where at the foot of a south or south-west wall it may prove, with moderately deep planting, a charming companion to the Belladonna Lilies. Where a good stock of bulbs exists it is certainly worth a trial. A coloured plate of this was given in THE GARDEN recently.—E. J.

Kniphofia hybrida Triumph (Hort. Leichtlin).—The above-named late blooming form of these fine autumnal ornaments of our gardens is now in flower with me for the first time, and is quite the most beautiful variety I have ever seen. It was raised a few years ago by Herr Max Leichtlin, of Baden-Baden, who has done more for the improvement of these fine plants than any other person. He has done well to name this variety Triumph, as in size, clearness and brilliancy of colour, and form of flower it is as near perfection as may be and leaves nothing to desire. The colour is a clear shade of apricot-orange, with a distinct white marking round the mouth of each flower. As it commences to open in centre of spike and continues to expand upwards and downwards simultaneously, I conclude that K. comosa must be one of its parents, as this is a marked characteristic of this very distinct species (which has bloomed with me here this summer for the second time). It differs from K. Leichtlini, which commences invariably to open at the top of the spike, and from K. aloides and all its numerous progeny, which open from the base of the spike upwards. I also noticed this characteristic in the fine deep orange hybrid Sirius, which leads me to the conclusion that in it also the blood of K. comosa must predominate. Of all the hybrids known to me Triumph comes nearest to Lachesis, also very beautiful and free-blooming, and coming from, I believe, the same garden, but the subject of this note is a great improvement on them all.—W. E. GUMBLETON.

Amasonia punicea.—This plant may now be seen flowering freely in Messrs. Veitch's nursery at Chelsea. Gardeners are getting to know of its beauty and great usefulness for giving a welcome colour to plant stoves or warm greenhouses during the latter months of the year—in fact, from now onwards till Christmas. There is nothing to rival it in brilliance but the old Poinsettia, and it is so very different from that plant, that those who have need of the one can hardly fail to include both. As hinted above, it will succeed in a warm greenhouse where the temperature does not fall much below 60°, and as regards cultural treatment, that is much the same as for the Poinsettia. It will not, however, stand the somewhat hardy summer treatment that many growers give to the latter. Amasonia punicea derives its brightness from red bracts, which, however, are not in a head, as in the Poinsettia, but distributed along the stem after the manner of the leaves, of which, in fact, they are miniatures. The spike of these coloured bracts not unfrequently attains to a length of from 15 inches to 18 inches. There were some fully 9 inches in length even thus early upon the plants we saw at Chelsea. These bracts also are not the only colour beauty of the plant, although by far the most persistent, but it has flowers as well of no mean beauty. These, borne from the axil of each bract, are long and tubular like those of a Gesnera, but more cylindrical, contracted at the mouth, and of a deep yellow colour. Another valuable point in connection with this plant is the length of time the bracts will remain in good condition.

Notes from Baden-Baden —Colchicum gigan teum, now at its best, resembles C. speciosum, but differs in the larger size, brighter and softer colour, and also the shape of the flowers, the segments being more pointed. In any case it is a superior plant. Crocus vallicola, which opened on September 10, is still good; the creamy white striking flowers make the border gay. Galanthus Olgæ Reginæ seems to be at least three weeks earlier than G. nivalis octobrensis; the buds appeared through the soil on September 15, and had we not had such dry weather, they might have pushed even earlier. This hot and dry weather has also caused that loveliest of all Kniphofias—K. Nelsoni—to show its flower-scapes much earlier than last year. Six to ten came from one root and the plant reaches up to 4 feet. The spikes—very narrow, only 1½ inches thick and about 10 inches long—show brilliant and different shades of scarlet, and the somewhat loose arrangement of the single, rather thin flowers makes it very attractive. The picture is brightened by the grassy, bright green foliage. Coriaria nepalensis is in great beauty. It is a suffrutescent perennial which in winter dies down to the root-stock; the twigs, which reach 3 feet, are well clothed with pale green, kidney-shaped leaves, and the insignificant flowers appear at the ends of the main twigs. They will soon change into fruits, which hang gracefully down like large Currants, and are of a bright, deep orange-yellow. It likes a shady position. Among the numerous Solidagos, S. Gattingeri must be mentioned. It is of the same colour as the other species, but, owing to a different arrangement of the panicle, has a much lighter, feathery appearance and looks very pleasing.—MAX LEICHTLIN, *Baden-Baden.*

The weather in West Herts.—The sixth successive unseasonably warm week, while the last three days—Monday, Tuesday and Wednesday—have been exceptionally hot for the time of year, the highest readings in the shade being respectively 78°, 82° and 79°. Indeed, the maximum shade temperature (82°) on Tuesday was higher than any recorded here in September during the preceding ten years. Previous to this hot spell there occurred two cold nights, when the exposed thermometer showed 2° of frost. Beyond shrivelling a few single Dahlia flowers, these frosts did no damage in my garden. The range of temperature throughout the week has been considerable, and on Tuesday last the difference between the lowest night and the highest day readings in the thermometer screen amounted to as much as 37°. The air also has remained during the daytime remarkably dry for September, and on one day the difference between the readings of the dry and wet bulb thermometers reached 14° at 3 o'clock in the afternoon. At this hour the heat has throughout the week been invariably greatest. At 1 foot deep the ground temperature has risen nearly 5° during the last three days and now stands at 62°, or about as high as would be seasonable at the same period in August. The dews have again been very heavy, but no rain has fallen for nearly three weeks, while the percolation through the heavy soil gauge has ceased altogether, and only a few drops of water are found each morning to have passed through the one containing light soil. During the last five days the sun has shone brightly on an average for over 8½ hours a day.—E. M., *Berkhamsted.*

OBITUARY.

Death of Herr Hermann Stenger.—Herr H. Stenger—who was successively in the service of Messrs. Veitch, at Exeter and Chelsea, Messrs. Henderson, Pine-apple Place, Messrs. Carter, Holborn, and finally represented Messrs. Vilmorin in this country—died suddenly on Monday last at his residence at Dulwich. During the last fifteen years he has been quite incapacitated by paralysis, but, thanks to the generosity of his last employers (whom he served only a few years), he ended his days peacefully and happily.

Rosa rugosa not fruiting.—I have for several years had R. rugosa and R. rugosa alba growing vigorously and blossoming freely, but they rarely set any fruit. I should be very glad to know if any reason can be given for the failure.—A DEVONSHIRE SUBSCRIBER.

Drying fruit.—In reply to the query of "North Cotswold" in your issue of September 21, I can inform him that the Waas evaporator, for which Mr. F. E. Clotten, of 65, Euston Road, is agent in England, can be used upon a hot plate and will evaporate Apples or dry Plums satisfactorily; price £3 3s.—J. H. THOROLD.

Rose Lady Helen Stewart.—I should be glad to have from those who have tried it their opinion of the Rose Lady Helen Stewart. I have found it a pretty and distinct Rose, but covered with mildew from the beginning of the season, when there was no trace of it on other Roses. I do not think the cause of mildew has received sufficient attention. I am inclined to think that the system of pruning back for autumn blooms, which we have all practised for many years, has a tendency to foster it, as it induces a plentiful growth of young tender shoots, which are the first to be attacked by the disease and are powerless to resist it; in fact, the only remedy seems to be to cut them off. The old summer Roses which are not treated in this way are seldom troubled with the pest.—M. E. C.

Names of plants.—*Eric James.*—1, Selaginella divaricata microphylla; 2, Microlepia hirta cristata; 3, Selaginella Griffithi; 4, S. Brauni (Wildenovi of commerce); 5, S. sp.; we cannot identify; 6, S. erythropus (umbrosa of commerce).——*Beech Hill, Woking.*—Petunia White Countess of Ellesmere. ——*A. M. Bannerman.*—Chenopodium capitatum. ——*F. D. Brocklehurst.*—Clematis graveolens. See plate in GARDEN, March 24, 1894.——*A. Bowles.*—Colchicum speciosum.——*XX.*—1, Pteris cretica albolineata; 2, Pteris cretica; 3, Asplenium viviparum; 4, Adiantum gracillimum; 5, Adiantum concinnum latum; 6, Adiantum capillus-Veneris; 7, Pteris scaberula.——*W. Wickham.*—A species of Phlomis, but we should like to see flowers.

Names of fruit.—*Dr. Legge Paulley.*—Apples: 3, Fearn's Pippin; 4, Blenheim; 5, Mère de Ménage; 1 and 2, next week.——*W. P.*—Pear Pitmaston Duchess, Plum rotten.——*J. G. C.*—Pears: 2, Swan's Egg; 3, Gansel's Bergamot; 5, Pitmaston Duchess; 6, Beurré Bosc; 7, Hessle; others next week.

BOOKS RECEIVED.

"Roses and Rose Culture." By Wm. Paul. Eighth edition, illustrated. Simpkin, Marshall and Co.

"Greenhouse and Window Plants." By C. Collins. Macmillan and Co.

"Amateurs' Orchid Cultivator's Guide-Book." By H. A. Burbury, Orchid grower to Sir J. Chamberlain. Second edition. Blake and McKenzie, Liverpool.

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"This is an Art
Which does mend Nature; change it rather; but
The Art itself is Nature."—*Shakespeare.*

ORCHARD AND FRUIT GARDEN.

PLUMS AND DAMSONS.

This year, again, there have been enormous crops of both these fruits, and the usual lament as to prices has been heard on all sides, many growers stating that after paying all expenses nothing has been left for them, and in some cases they have been brought into debt over their consignments. One grower informed me that he sent 4 cwt. of rather small yellow Magnum Bonum Plums to a midland market. The salesman, after paying carriage and deducting his commission, sent the grower two penny stamps as the nett returns for the fruit. Other similar cases could be mentioned where something like the same has been realised for Plums and Damsons in bulk, in consequence of which it is frequently stated that the demand is much below the supply, and that the culture of these stone fruits is overdone. On the face of it many would be disgusted at the very low value but there is another side of the matter, viz.: how far is the grower himself responsible for such unsatisfactory results? First, the fruit is small owing to the heavy crop and inadequate manuring to develop it fully. Secondly, inferior or unsuitable varieties are grown; and thirdly, there is wretched packing. It is astonishing to see the splendid crops of large fruit that Plums and Damsons will bear if heavily manured, but how few give the trees the liberal treatment they ought to do when thus burdened? The answer some would make is that the expense in purchasing fertilisers is too much; but if by expending £5 the grower can make £50, no one can question the wisdom of such an investment. Having had a good deal to do with expenditure and receipts in fruit culture, the above figures represent the average returns made by judicious manuring, and I may further add that Victoria Plums have realised from £18 down to £7 per ton this year, only one consignment falling so low as £7 out of many tons, proving conclusively that it pays to spend a few pounds extra to get full size in fruit in plentiful seasons.

Inferior or unsuitable varieties are another source of dissatisfaction, and in such years as the present are more trouble than they are worth, not paying for gathering and railway carriage, and the sooner such trees are beheaded and grafted with better sorts the greater advantage it will be to the owner. Two varieties that might be worked upon such stocks are Early Prolific and the Czar. Both of these come into use before there is any danger of gluts, and were worth on the average £14 per ton this season. They are excellent market varieties, and the former is a well-known constant bearer that always travels and sells well. Czar is a larger and a little later Plum finding favour in most markets. Victoria still heads the list as a midseason sort, but everyone is planting it, and it is more than possible that it may be overdone in future. Where Pond's Seedling succeeds well, it will pay to work it upon strong, but inferior varieties, as it is later than Victoria, and sells well when that variety is over. Pond's Seedling answers in the west of England, but I have never had it of the size it attains in the north. At the Edinburgh show, September 10 and 11, it was exhibited in grand form by many exhibitors.

Packing is most discreditable, and the wonder is that salesmen are able to sell much of the fruit at any price. When in several northern markets last week I saw Plums, Damsons, Apples, &c., put in flats, pots, barrels, and other packages without hay, paper, or any substance to act as a cushion for the fruit; consequently it had travelled badly and looked dear at any price. Plums put in flats and sieves had in many instances rolled about in transit, and where a damaged or decayed fruit was in it had spoiled the sample completely. Damsons were in the same condition, and the salesman who had received them said he could not dispose of them. If the same fruit had been lightly and carefully packed it would have made top prices. The grower himself is entirely to blame in such cases, and until these senders alter their mode of packing we shall continue to hear of wretched prices. Compare the great difference in the Plums now coming from California and Hamburgh into our markets. In spite of the longer journey, shipping, and re-shipping, they are far more presentable than much of our produce, although inferior in flavour, and unless we improve in our marketing we shall have more of these foreign consignments to contend against. In Manchester I saw sieves of dark Plums from Germany and other Continental sources selling freely at 2s. 6d. per sieve. W. G. C.

Apple King of the Pippins.—How unsuited this Apple appears to be for growing as a standard upon the Crab stock. I have lately seen scores of trees of it, and in no case have I seen a healthy, free-growing tree. Although the trees were bearing heavy crops of highly-coloured fruit, the growth appeared to be stunted and not at all like what one cares to see in a standard. Here in this garden it is the same; the trees as standards make annually very little growth, but bear freely, while the bushes not only crop heavily, but grow freely.—E. M.

Plum Jefferson.—I can quite bear out the estimate of "E. M." as to the value of Jefferson Plum. I doubt if a better all-round variety could be named. I commenced picking at the latter part of June from a fine tree growing in our Plum house. For cultivation under glass Jefferson is admirably adapted, the trees fruiting very freely, the fruits individually being of large size and of most luscious flavour. Against an east wall it has been superb, and I have fruits now hanging (September 21) fully ripe on a tree trained against a north wall. Nor is this all, as it has fruited and ripened up grandly—in fact, is one of our heaviest croppers as a standard in the orchard, also as a bush. This is a good record for any Plum. This variety of Plum may have its likes and dislikes like other fruits as to soils, but I never yet met with it other than succeeding well; consequently I feel safe in recommending a trial at least being given.—A. Young.

The Codlin moth maggot.—On p. 194 Mr. Groom asks if the above pest is general, and what steps can be taken to prevent its recurrence. In answer to the first query, I hear many complaints in this part (South Herefordshire) as to the havoc wrought by this maggot in the Apple crops, and while so little is done to prevent its increase, I question if the attack will not be worse in the future. In many orchards the infested fruits lie for weeks to rot or be eventually collected for cider making, and while on the ground the larvæ have plenty of opportunity to pass from the Apples to more permanent quarters to lodge for the winter and increase and attack future crops. All these fallen fruit should be immediately picked up as they fall, or pigs might be permitted to range many of the orchards, and thus effectually dispose of the embryo enemy. This would only be effectual in standard orchards; where there are dwarf trees or standards with bush trees between, pigs could not be utilised very well. In those cases where the Apple trees are low it is a very easy matter to most effectually keep the Codlin moth at bay. Out of some 6000 bush trees I think we have not had six Apples infested with the grub in as many years. In spraying for the larvæ of the winter moth, prior to and immediately after the blooms setting, with Paris green, 1 oz. to 20 gallons of water, I discovered that the Codlin moth grub never put in an appearance, though the same trees had been severely attacked the previous season, and other orchards not sprayed near had a large proportion of their fruit ruined. This is the sixth year I have employed Paris green, and, as stated, it is a most uncommon occurrence to find an Apple with a grub in it. No doubt there will always be a certain amount of prejudice against the use of Paris green owing to its deadly poisonous nature, but I can assure any readers that with ordinary care no injury will be done to human beings, cattle, or poultry, and the gain in having perfect fruit will not only enhance the value of the same, but also add to the reputation of the grower.—W. G. C.

Size in fruits.—One of the effects of the present truly wonderful as well as abnormal season has been the very evident increase in size of both Apples and Pears on ordinary orchard or standard trees in all sorts of soils, but especially on stiff soils. I have seen Hessle, Swan's Egg, Calebasse, Beurré de Capiaumont, Beurré Diel, and similar varieties grown as hardy orchard fruits for market sale in size, colour, and cleanness of skin far superior to what has been grown for many years. This shows the great importance of warmth as well as of comparative atmospheric dryness in helping to produce good orchard Pears. As one result we may find these fruits ripening unusually early; indeed, it seems probable that the bulk of Pears will be ripe a month earlier than would be the case in ordinary seasons. The greater size and finer appearance of the fruit, the Pear crop being generally a moderate one, have proved most beneficial to the market growers, who have been obtaining for these fruits what is to them very satisfactory prices. Apples, too, under similar conditions have shown remarkable advance over what is seen in ordinary seasons in the fruits being of exceptional size and finish. I saw the other day a heavy crop of Ribston Pippin upon an old tree from which for twenty years previously it had hardly been possible to gather a decent sample because of spot or scale, also because of canker. Cox's Orange Pippin has in many places shown exceeding size and fine colour. King of the Pippins and Yellow Ingestre are very large and of superior finish. Lord Suffield and Manks Codlin never have been finer, although these once highly favoured Apples can hardly be sold at 1s. per bushel. Whilst Pears have sold very well, Apples are in such immense quantities, that they find a poor market in spite of their fine appearance. It is a penalty which has to be paid for having too many early ones and a marvellous crop.—A. D.

PLUMS AGAINST WALLS.

This has been an ideal season for Plums, the fruits being both freely produced and well developed. Where a large selection is grown it has been most interesting testing the different varieties, each having a flavour peculiarly its own. The best, however, have been produced against walls. There are certain gardens and districts where good dessert Plums are produced in the open on trees grown as bushes or standards, but these are the exceptions. To produce these special dessert varieties in their best form wall culture is undoubtedly the best. It is astonishing the advantage even a north wall is to Plums, that is when some attempt is made to treat the trees properly, in the matter of a suitable border especially, as herein I think lies the secret. There is the advantage of the season of these fruits being prolonged, which is well worthy of consideration. Green Gage, Kirke's, Jefferson, and Washington are excellent planted against a north wall, so also

is Angelina Burdett. The secret lies in having a raised border sloping from the back to the front, and where a width of 7 feet or 8 feet can be left undisturbed. The roots are therefore encouraged near the surface, which is most essential. The whole surface becomes a perfect network of healthy fibrous roots. Plums, like other fruits, cannot be expected to succeed, even against any aspect, when the surface up to within a couple of feet of the wall is disturbed by annual digging. The soil being loose and rich, the growth becomes gross and unfruitful. A width of at least 6 feet should be devoted to the roots, and then with a judicious system of summer pinching and training, with freedom from insect pests, the production of well-developed fruits is assured. Barrenness is more the outcome of faulty treatment than even climatic influence.

Plums will not succeed on a cold ill-drained soil, but it must not be surmised that I wish to infer that Plums will not succeed on what are termed naturally cold soils, as the soil of this garden is certainly of this description. If there is any doubt about the trees not succeeding well, and this is quickly discerned by the trees fruiting sparsely, also by the fruits cracking and having a rusty appearance, the border should be raised, also drained if necessary. If it is not convenient to work the whole border over, quite large stations should be formed, the soil being taken out to the depth of 20 inches, and when returned have a good addition of wood ashes or burnt garden refuse and old lime rubbish. This may seem a lot of trouble to take, but the results obtained justify the work.

Select trees for planting which have five or six well-balanced shoots. These should be shortened back after the soil has settled down and before growth commences, so as to secure well-furnished trees from the base upwards. A. Young.

Apple Lane's Prince Albert. — I note "F. W. B." in his interesting note (p. 221) on back garden Apples includes this in his list, and certainly it is worth more than passing notice, as it grows in any soil or position. I have had it for some years and it has never failed to crop freely, bearing fruits above medium size. For small gardens in bush, pyramid, or cordon form it is the most prolific variety that can be grown. Small trees crop very freely on the Paradise stock.—G. W. S.

Apple Cox's Pomona.—The above variety this season is remarkable for its heavy crops. All kinds of trees, and in districts far apart, are bearing heavy crops, the fruit being very highly coloured. I am aware this variety cannot be termed a first-rate fruit, as it so soon loses flavour when stored, and if gathered early becomes mealy and of poor flavour. With care in storing, allowing the fruits to hang on the trees until quite ripe, they are much better in flavour and they keep well into November. Birds and wasps are very fond of these soft-fleshed and highly-coloured fruits, and to preserve the crop, early storing is practised; but it is better to lose a few fruits than spoil the value of the whole crop. The above is doing much better on the Paradise stock than on the Crab, and if allowed a free growth (not cutting hard back), it rarely fails to fruit. Many growers find this a most profitable market fruit for early autumn supplies.—S. H.

Apple Newtown Pippin.—I must confess to being astonished that "J. C." should consider the above variety of Apple the best-flavoured sort grown, excelling any of our own productions. As this discussion has arisen from a note of mine some months ago in The Garden, I have taken a good deal of interest in the various remarks made by writers in favour of Newtown Pippin, Cox's Orange and Ribston Pippin, and I must still adhere to my statement that there are no Apples from any part of the globe to equal well-grown and fully ripened fruits of the two last-named varieties. During the past few weeks I have been in the company of some of the best fruit growers in the kingdom, men who, in some instances, have made a special study of Apples and their qualities, and in every case when asked their opinion they emphatically stated that the best Newtown Pippins would not equal our best Cox's Orange or Ribston Pippins in flavour. Again, yesterday I saw one of the leading salesmen and largest importers of Apples, and who always sends me a selection of the choicest imported Apples, and he stated that no foreign Apples would compare favourably with the two British sorts named when grown on suitable land. Many arguments might be brought forward to prove the superiority of our own Apples, but I think it will suffice to state that no Apples from any part of the world realise the price in London as made by choice samples of Cox's Orange Pippin. Though not at liberty to mention names, I have received letters asking for the best Cox's Orange, with an intimation that I might charge my own price for the same; consequently such returns have been received as would appear incredible to those who are not aware of the demand for really the best fruit. As one fruiterer remarked, money is no object with customers who insist on having the best fruit procurable, and it stands to reason that if such buyers found Newtown Pippin equal to Cox's Orange Pippin or the old Ribston they would quickly cease to pay such fancy prices for the latter.—W. G. C.

LEAF-SOIL FOR FRUIT TREES.

It is surprising how well tree roots like leaf-soil. Only form a heap 20 yards or more from an Elm tree, and it will not be long before it is fully occupied and practically spoilt by a network of roots. Fruit tree roots are not so hungry and far-reaching as those of forest trees, but they, too, will find their way into heaps of decaying leaves at a considerable distance from their stems. In an old garden I have recently visited, a large Pear tree against a high wall was in a healthier condition than the rest, the fruit being larger and freer of blemish. Eight feet away from the wall there is a sunken pit, to which all the leaves collected in the pleasure grounds are wheeled and left to decay. Each season when the decayed leaves are taken out for the flower garden, potting shed, and such like it is found over-run by Pear tree roots, and it is the food the latter draw from this source that greatly benefits the tree. Acting on my advice, a portion of the many fruit trees in this garden will, in their turn, have a heavy mulching of these half decayed leaves (decaying stable manure might be added with advantage, only it is not forthcoming), and it will not be long before they present an improved appearance. Merely surfacing over the ground to a distance of 6 feet or more from the stems would not meet the case. The roots ought in all such departures to be bared, returning the surface soil on to a dressing 6 inches thick of the decaying vegetable matter. Unless so covered with soil the leaves cease to decay, get dry, blow about, and do little or no good.

One of the best collections of pyramid and bush Apple and Pear trees I have ever seen was then, and is still, kept in a most healthy, heavily productive state by occasional top-dressings of decaying vegetable refuse other than manure. During the autumn and winter a great heap of leaves, sweepings from lawns and walks, road trimmings and vegetable refuse is formed, and this is duly well mixed together and formed into a huge Vegetable Marrow bed. At the end of the season, or soon after frosts destroy the Vegetable Marrows, the heap is turned, all large stones thrown out and sticks, stalks and such like cast on one side. With the aid of the latter a garden smother is formed, and the ashes and burn-bake resulting are then mixed with the larger heap of decaying refuse. In this way enough material is collected to top-dress about one half of the trees each year, and so well do the latter appreciate this attention that the borders are alive with roots. There is no rank growth of trees promoted, but, on the contrary, the mass of fibres near the surface is just what is wanted to keep them in a healthy, yet most free-bearing condition. A complete failure is rarely, if ever experienced, and it is no fault of the trees if they do not annually produce a heavy crop of fine clean fruit. These top-dressings, besides affording food, act beneficially during the summer, conserving moisture and preventing cracking; also obviating the necessity for lifting and root-pruning.

W. I.

Grape Cannon Hall Muscat.—How seldom do we see this Grape grown in private gardens really well. From what I have lately seen of it I have come to the conclusion that it requires somewhat heavy soil to grow in. In some localities where the soil approaches sand this Grape is quite a failure. At Mr. P. Kay's Grape-growing establishment at Finchley is to be seen one of the finest examples of culture of this Grape that one can imagine. A span-roofed house 400 feet long and 36 feet wide is planted on both sides with it with the exception of two canes of Black Hamburgh in the centre. These latter are presumably for obtaining pollen to aid in the fertilisation of the Cannon Hall variety, which is a bad setter. No complaint of that sort can be made here, judging from the Grapes which were then hanging upon the Vines. The berries were large, too large perhaps to please some persons. Each Vine was carrying two rods; the close-spur system of pruning is adopted.—E. M.

Apple Baumann's Red Reinette.—This is one of the best Apples I have grown in cordon form, and it is worth a note on account of its free-bearing qualities. A few years ago, wanting a fence to hide a portion of the vegetable quarters, I was advised to plant the above, the growths being trained to a few wires. The trees were maidens; some were allowed to make two leads, others one. All have done well, and the fruits being freely exposed, they colour up grandly. I admit the flavour cannot be termed first-rate if the fruits are classed as dessert, but it is not strictly a dessert kind. It is a great bearer with me and is very telling in a collection, its bright crimson colour being remarkable, and when well grown it is above medium size. It makes a fine pyramid and is a useful kind for gardens with restricted space.—S. H. B.

Apple Margil.—This old dessert variety is well worth including in new lists where flavour is appreciated, as it partakes largely of the Ribston flavour. I admit it cannot in some soils be termed a heavy cropper, but, on the other hand, it bears regularly and makes a pretty bush or pyramid. When grown as a standard it does not make a large tree, but is a fair cropper in most seasons. This variety is still a favourite in many gardens in spite of so many new introductions, and as it keeps well into the winter it makes a nice dish for dessert, and will often thrive where Ribston fails. For years I grew this variety in espalier form, and as such it is very suitable. It is a neat grower and requires less pruning than many others, doing well on the Paradise stock.—S. H.

Young Strawberry plants.—Gardeners who took the hint and planted their young Strawberries on solid ground, prepared some time beforehand, will this autumn prove the superiority of such a root run over loose, freshly-dug ground. The former retains the moisture so much better, besides keeping the roots at home and encouraging the formation of abundance of fresh fibres. Further, those who did not mulch their young beds after planting, especially on light soils, will find that, owing to excessive evaporation, growth is less vigorous than usual. On such soils I would advise mulching even now, not necessarily over the whole area, but for about a foot round each plant. Spent Mushroom manure is the best, as

this is close and does not allow of any escape of moisture. Several copious waterings should follow this operation, and if of liquid manure so much the better. Where this cannot be had, give a liberal sprinkling of artificial manure previous to laying on the mulch. Plants so treated will more than repay the extra labour in the weight and quality of the fruit next summer.—J. C.

FIGS IN THE OPEN AIR.

To the Editor of The Garden.

Sir,—I am exceedingly glad to see that you are taking up the subject of Fig growing. It seems to me somewhat strange how little this popular and delicious fruit is, comparatively speaking, cultivated in England, especially as it is so easily grown. I have about twelve or fourteen trees in my outdoor garden; some of these are grown against walls and some are standards. The late winter was a trying one in the extreme, so much so, that I was reluctantly induced to protect three of them by way of experiment, all of which suffered even to the very roots, but they are now, I am glad to say, vigorously recovering. The others, unprotected in any way, pulled through the winter well and produced excellent crops in nearly every instance, and if I had sold their produce it would have fetched more money than double or treble an equal number of my overburdened Apple or Pear trees. Most of my trees have been planted upwards of twenty years, and those not protected rarely fail whatever may be their situation, either standing alone or against a wall. The former I rarely or ever prune, but the latter I prefer pruning, as the sun ripens the fruit better and quicker. The Brown Turkey I find the most prolific. I apply every other year lime rubble to the roots and occasionally a little ordinary manure. I keep down the tap roots, water liberally with soft rain water and occasionally with soot water. Strong manurial stimulants create wood, but not fruit. Figs, I believe, can be easily and profitably produced and with very little trouble. Gwent.

Newport, Mon.

Apple Bramley's Seedling.—Those who planted this variety a few years ago will have good reason to congratulate themselves on so doing. It is a very free-bearing variety in a young state, and will keep well into May given a cool store. This variety was brought into prominent notice at the Apple congress held at Chiswick in 1883. The fruits are very handsome, large, solid, heavy, angular, deep green, with dull red streaks, and of very good cooking quality. When in bloom it is quite distinct from many others, having a large flower of great substance. It is doing very well as a bush on the Paradise stock and is most prolific. It is also doing well as a standard, making a vigorous growth.—G. W.

Open-air Peaches.—This will be a record year amongst Peach growers, both as regards the quantity and quality of fruit on open walls. Of course this remark can only apply to places where the trees are well looked after all the year round, for the time has gone when, owing to genial springs and even seasons throughout, good gatherings could be made from semi-neglected Peach walls. This season healthy trees which have been well mulched and freely supplied with water have produced large fruit of extra good colour. This is true even of later sorts, such as Barrington and Late Admirable. In a gentleman's garden near Retford, by no means a good locality for gardening, the Peach trees on walls are a sight worth seeing. This is due to the continuous attention bestowed on them. In spring, as soon as disbudding is completed, almost daily syringing of the foliage is practised, except when the weather is sunless and cold, this being continued right up to the time the fruit begins to colour. This is perhaps too much to expect from gardeners where labour is short, but if spring washings are not frequently done, aphis is sure to get a footing and ruin the crop, if not the trees. At the place under notice the wood is laid in thinly, the trees well mulched and copiously watered in dry weather with farmyard liquid. Depend upon it, were these simple yet essential cultural details attended to regularly and well, many gardeners might still grow good Peaches on open walls who have abandoned the attempt owing, as they say, to the unsuitable seasons. From various sources I learn that the demand for Peach trees for planting on walls has been far greater during the past two years than for many years previous, which is certainly a hopeful sign.—J. C.

Notes of the Week.

A note from Scarborough.—This golden summer weather has made our northern gardens glow with unwonted brilliance. If only a coloured photo were possible! The failures of last year and the damages of last winter are now compensated by this rich harvest of luxuriance and wealth of beauty.—Edward H. Woodall.

Polygonum orientale makes an imposing autumn group when grown as well as at Kew, where two beds are quite a feature in the herbaceous grounds. The plants are nearly 10 feet high, well clothed with large deep green leaves and flowering freely. It wants a light, rich, warm soil in order to grow to such great dimensions.

Chrysanthemum Coquetterie.—I enclose a bloom of this which has been open about ten days. The plants are about 3 feet high, and the natural time of flowering is October. Crown buds are white with saffron centre and the terminals blush.—R. Owen.

*** A remarkably fine flower for so early in the season.—Ed.

Stokesia cyanea is a beautiful flower of the present time, but not usually seen in good form, as it often gets spoilt by rain in the average autumn. It has large and showy blooms of a pretty blue colour. A good bunch of fine flowers was prominent in Mr. M. Prichard's group at the Crystal Palace fruit show.

Caryopteris mastacanthus, favoured by the unusual heat, is flowering well this autumn, and we noticed several pretty bushes of it in full bloom at Coombe Wood. The flowers, small individually, but borne in crowded clusters all along the shoots of the current season's growth, have a distinct and graceful appearance. They are of a pretty shade of lavender-blue.

Dahlia Watford Beauty.—This single Dahlia, of which a quantity was shown by Messrs. Cutbush at the Crystal Palace fruit show, is one of the most beautiful kinds we have seen for a long time, distinct, effective and most harmonious in colouring. The flowers are of a bright shade of orange-buff, true old gold colour with a crimson zone at the base of the petals, which imparts a particular richness to the centre of the flower.

Desmodium penduliflorum is one of the most conspicuous shrubs now blooming in the Coombe Wood Nurseries. There is an old stool of it and the shoots die back to the ground every year. In spring, young growth starts up vigorously, and by autumn the shoots are 6 feet or more in height. They are loosely supported, and the long racemes of bloom fall over in a most graceful way. The flowers are of a deep rosy purple colour.

Vernonia fasciculata is an uncommon autumn-flowering composite now blooming in the herbaceous grounds at Kew. It would be more appreciated if naturalised than growing in a choice bed or border, but we noted it for the deep rich violet-purple tint of its flowers. These are Daisy-like, but double, and borne in crowded heads on the top of shoots that resemble those of the Osier alike in their tall, slender, unbranched growth and profusion of long, narrow, drooping leaves.

Flowering hardy Hibiscus.—I send you a spray of the North American Hibiscus (hybrid, I believe) which is flowering fairly freely this year. It would be a handsome plant if its lower leaves did not begin to turn yellow as the flowers appear. The plant has been in a corner in the kitchen garden for the last five years, and has flowered three times, but never so freely as this year.—W. Shirley, *Fareham.*

Rudbeckia occidentalis deserves to be grown along with the best Coneflowers judging from its appearance at Kew, where a fine plant is conspicuous in the Coneflower group. In leafage it is quite distinct from other kinds generally grown, as it has compound leaves made up of two pairs of broad-lobed leaflets and a larger terminal one. The flower has about ten long, broad rich yellow rays and a rounded cone of a greenish shade in the centre.

Cereus rostratus. — This showy Mexican plant has been producing its huge yellowish cream blossoms recently in the succulent house at Kew. The flowers were produced quite near the glass, high up on the quaint fleshy stems, and must have been nearly, or quite, 10 inches across at the widest part. The species evidently requires a considerable length of rafter to develop its peculiar growths, and though very showy when in bloom, it can hardly be regarded as free flowering judging by its size.—E. J.

Single Cactus Dahlias.—Messrs. Dobbie and Co., of Rothesay, who introduced this class into our gardens, and who have raised many fine varieties, send us a gathering of flowers of these. The old type of single Dahlia was very regular in form, but in the Cactus varieties there is a decided break away from this, which will no doubt cause them to find many admirers. Among those sent there are yet many poor washed-out colours, but we are glad to see that rich and pleasing self-coloured varieties are being raised.

The Italian Pimpernel (Anagallis Monelli).—There are several forms of the Italian Pimpernel with distinctly coloured flowers, and all are hardy annuals, well worth attention in the garden. They would make pretty edgings if sown in a sunny spot, as they trail about in the same way as our native kind. At Gunnersbury House Mr. Hudson has sown a line in front of one of the borders, and the variety is a very fine one, with large flowers of a deep self Gentian-blue colour, very rich in sunshine when many flowers are open.

Perpetual Pinks.—It is a great gain to have the Pink season extended into the latest days of autumn, for one can hardly become tired of the refined colour and delicious fragrance of this flower. The variety Ernest Ladhams is now becoming well known. At the Crystal Palace show Mr. Ladhams showed this kind and seedlings from it of the same perpetual character, making altogether a display of Pinks that suggested early June days rather than the close of September. The flowers were as fresh and fragrant as in early summer days.

Kniphofia caulescens.—This handsome and distinct species is well grown by Mr. Latham at the Birmingham Botanic Gardens. By its characteristic boldness generally, as also on account of its spreading leaves, the species is well suited for isolated positions, and being perfectly hardy may be planted in high and dry positions in the rock garden where few plants thrive. But in these it must not be shut off from a good depth of soil for its roots. Under Mr. Latham's care it receives a position quite sheltered from keen and cold winds, as these inflict greater injury than severe or prolonged frost. South or south-west positions suit it admirably, and in both positions it was unharmed during last winter, the plants receiving no protection whatever.—E. J.

Dahlia Mrs. Francis Fell.—The objection that is raised to the majority of the Cactus-flowered Dahlias—that they hide their flowers among the shoots—is a reasonable one, and a fault

that raisers should seek to eliminate in new kinds. It is most essential to do so if these Dahlias are to become popular as garden flowers. The variety under notice is a new kind that is free from the drawbacks above mentioned, judging from a plant we lately saw with Mr. Hudson at Gunnersbury House. The upper portion was a mass of flowers, thrown out well from the shoots. The flowers are pure white and of the finest Cactus form.

Acidanthera bicolor has again been flowering freely in a frame at Kew, and, although not quite hardy enough for open-air growth, is a graceful and beautiful plant that many will like to grow. In habit and appearance it is intermediate between an Ixia and a Gladiolus. The flowers are thinly arranged on the spike and decidedly pendulous. They consist of six equal pointed segments of a creamy white colour, whilst at the base of each is a triangular blotch of violet-purple, which gives a decidedly rich effect. A coloured plate of this plant was given in The Garden for May 18 of this year.

Genista tinctoria elata. — The common Dyer's Weed is a nuisance in poor pasture fields, as cattle will not eat it nor mowing kill it. Its presence plainly indicates poverty of soil, and we have seen it charming in sheets of yellow upon poor stony banks where little else would grow. The variety under notice is merely a tall growing form, but its value as a garden plant is greater in consequence of its extra stature, and it is also one of the latest flowering representatives of the Broom family. Mr. Prichard showed shoots of it a yard or more long, and covered with rich yellow flowers, at the Crystal Palace show, and we have seen the plant very beautiful in the rock garden at Kew this season.

Acer rufinerve is a beautiful Maple growing in the Coombe Wood Nurseries. It has the peculiar and pretty bark variegation so characteristic of the Pennsylvanian Maple, even more pronounced than in this species, whilst it is a much better tree, as it grows faster. The bark of the stem and of the mature branches is deep green striped with white, and that of the young growing shoots is silvery white, covered with a glaucous bloom. The leaves are long, slightly three-lobed, and turn rich yellow in autumn. Such a pretty tree as this ought to be frequently seen, and with the added beauty of its bark variegation it would prove attractive the whole year round.

Abies brachyphylla is one of the most promising of the newer conifers, and, judging from the fine breadths of it we lately saw in the Coombe Wood Nurseries, a hardy and handsome kind that planters would do well to try. Messrs. Veitch consider it a better tree than Nordmann's Silver Fir, and the present state of a large break of this kind beside that of A. brachyphylla points to the same conclusion. In habit of growth A. brachyphylla may be described as intermediate between Nordmann's Fir and A. Pinsapo. The leaves are deep green above, but beautifully glaucous on their under sides. The fine shoots of the current season's growth show it to be a strong and rapid growing tree, whilst it is quite distinct from other kinds of Abies grown in gardens.

Autumn Roses.—Mr. Orpen, of West Bergholt, sends us a charming collection of Tea Roses from the open air, showing how well they flower in his district this fine year. Among them not the least beautiful are some Roses with a single tendency, and also a particularly splendid one which Mr. Orpen considers the same as Bardou Job, and as to which he makes the following remarks: "Mr. F. Cant, who gave me the buds from which I raised my plants, considers it distinct from Bardou Job, and showed it at the Crystal Palace as a new variety in 1894, but the judges did not consider it distinct. I am not sufficiently acquainted with Bardou Job to form an opinion, but I know this I send you is one of the grandest garden Roses I have ever seen; the foliage is very fine and large and the plants are always in flower. The growth is very strong; some made this season is over 6 feet high."

Citrus triptera.—The past winter has not diminished the size nor in any way injured the fine plant of this hardy Orange growing in Messrs. Veitch's nursery at Coombe Wood, and it is now bearing many fine fruits. It is a remarkable and beautiful shrub, worthy of a place in the choicest collection. Its leaves are trifoliate, of a light green and almost persistent; the bark of the shoots, too, is of a deep green colour, and the flowers are produced singly along the shoots, the bark of which makes an admirable foil, as the leaves are but thinly borne. The shoots are also armed with formidable stout spines, some of them nearly 2 inches long. The specimen at Coombe Wood is about 7 feet high, with a dense pyramidal habit. A coloured plate of this Citrus and a woodcut showing its fruits were given in The Garden for September 22, 1894.

A fence of Dahlias.—It is not often that one sees Dahlias used to make a fence or screen, but at Gunnersbury House they have been used by Mr. Hudson with splendid effect, and nothing could be finer in these glorious autumn days than this fence of Dahlias. On the carriage front of the house an iron and wire fence with a Grass verge in front of it divides a piece of grass land from the carriage drive. A border of soil little more than a foot in width suffices for the Dahlias, which are tied to the fence and revel in their open quarters with abundance of sun and air. Their limited root-run conduces to profuse flowering, and they make a fine display, as only the best of the Cactus and decorative kinds have been planted. It is possible from this fence to cut daily supplies of flowers without in the least diminishing the beauty of the display, whilst it suggests another way of autumn gardening. Much more should be done with autumn flowers. In not a few places of late all that we could see of flowers were the remnants of the summer months.

Two beautiful weeping trees that ought to be freely planted are Pyrus salicifolia pendula and P. prunifola pendula, of both of which we lately saw beautiful examples in the Waltham Cross Nurseries, and although young specimens, they were distinctly beautiful. The Willow-leaved Weeping Pear, as we may fittingly style P. salicifolia pendula, is different from any of the large numbers of pretty Crabs, as it has long leaves like those of the Willow, and they are of a silvery white colour. The weeping habit is very pronounced, and to get the fullest beauty from the tree it should be worked on a stem 8 feet or 9 feet in height at least. Its fruits are Pear-shaped and yellow when ripe. P. prunifolia pendula more resembles the ordinary Crabs in leafage, but is very pendulous in growth, and would also be seen to the best advantage on a high stem. Its fruits are like those of the Siberian Crab, and take on when ripe a bright colour, rich red on the sunny side.

Magnolia Watsoni and M. parviflora.—These have already proved to be sterling additions to the hardy flowering Magnolias, but we were surprised to see a number of fine blooms of M. Watsoni shown by Messrs. Veitch at the Crystal Palace fruit show. Plants of this species and of M. parviflora as well are now flowering in Messrs. Veitch's nursery at Coombe Wood, and it was from these plants that the blooms shown were cut. Probably this present blooming may be but a freak, wholly or in part caused by the unusual autumn heat. As is well known, these deciduous Magnolias flower in spring upon wood of the previous season's growth, but the plants now flowering at Coombe Wood have produced blooms at the end of the current season's shoots. If they do this naturally in other years it will greatly add to their value, but of course as yet we have no proof that they will do so. All who can grow Magnolias should add these two to their collections, for they are both very beautiful. The flowers of M. Watsoni are the larger of the two, but those of M. parviflora are not so small as the name would suggest, whilst they are of a purer white than those of M. Watsoni.

Kniphofia Nelsoni.—I cannot at all agree with Herr Max Leichtlin's description of the above-named plant on page 252 of your last issue as the loveliest of all Kniphofias, nor can I understand for a moment how such a consummate judge of the relative merits of these plants (as he undoubtedly is) could commit himself to any such expression of opinion. I have now thirteen spikes of this miniature variety (or species, as it most probably is) either in full flower or coming on. These are produced by nine plants in their second year from seed received direct from its introducer —Mr. Nelson—so it is decidedly quick to mature itself and most free-blooming, as one of my seedlings bloomed last year in the first year of its existence. With these two points in its favour duly noted its merits end in my opinion, as its colour is dull, its flowers small and thinly produced on the spike, and in beauty, to my mind, it cannot for a moment be compared to the brilliant little K. Macowani, to which it comes nearest in appearance and habit of growth, though smaller in every way and with much narrower grass-like foliage, which quite disappears in the winter. Herr Max Leichtlin says "the plant reaches up to 4 feet;" whereas my highest spike is just 22 inches, or less than half as high. Then the dimensions of the spike are not more than half those mentioned in The Garden. I consider it to be a rather pretty little botanical curiosity and nothing more.—W. E. Gumbleton.

THE BOG GARDEN.

To the Editor of The Garden.

Sir,—Seeing in your number of August 10 that suggestions are invited by those who have made and succeeded in a bog garden, I am tempted to offer you my experience. Four years ago, having finished a rather large fernery, formed in a somewhat circular shape, with a picturesque-looking log hut at the further end, it occurred to me that the large piece of grass in the centre might be partly made into a bog garden. I began by excavating the soil, and made an oblong basin 30 feet by 20 feet and 4 feet deep. This was cemented with Portland cement, a plug being left at the bottom to allow the water to escape when required. I then built a second wall inside the basin about 4 feet to 5 feet from the edge of the basin, leaving occasional holes in it for the water to pass through. I then filled up the space between the two walls with a mixture of peat, earth, and some soil procured from a neighbouring marsh. The basin is filled by means of water from a well about 50 yards from the fernery. It is pumped up into a small zinc cistern, at the bottom of which a 2½-inch lead pipe is fixed. This pipe passes below the surface and communicates with the inner basin. The water escapes into the peat placed between the two walls and forms the bog. The bog is surrounded by a narrow gravel walk, on the outside of which an alpine garden is made of blocks of sandstone. The basin once filled and the bog saturated, there is no difficulty in keeping it supplied. In the centre basin I have Nymphæas of different sorts, N. odorata rosea, N. Marliacea, N. pygmæa, and N. Chromatella. In the bog I grow different kinds of Cypripediums, Pinguicula, Sarracenias, Trilliums, Fritillary, Iris Kæmpferi, Acorus, Osmunda, and many Gentians, G. Pneumonanthe, G. verna, &c., that love the drier edges of a bog. The ground, fortunately, slopes towards the bog, and has to be approached by rough steps through the rock garden, and the effect on entering through the outer fernery is very pleasing. I think the close vicinity of the water and bog suits the alpines. I have been very successful in the culture of alpines, and lost very few rare ones through last year's severe winter.

Woodbastwick Hall, Norwich. M. M. C. C.

CASTLEWELLAN, CO. DOWN.

It is not easy to do justice to Castlewellan, the seat of Lord Annesley, with the camera, beautiful and true as photographs may be, since the pictures on tree and lake, on the cloud-swept mountain-side and lawn, and on the sunlit sea are so evanescent and varied, and above all so rich and sombre, or so fairy-like and tender in tone, that the best of landscape artists even might fail in telling even half the tale.

Castlewellan is a place of diversified surface, set in amongst the mountains behind Rosstrevor, and it is the home of perhaps the richest and rarest collection of exotic trees and shrubs in Northern Ireland. This much will, indeed, have already been realised by all careful readers or students of The Garden who will have noticed the many illustrations from the Islands, as seen under the best circumstances of sunshine, lace-like mist and deep-toned shadow from the best points of view.

One of the illustrations shows the modern mansion at Castlewellan erected some half century or so ago near the site of an older country residence, the site or ground plan of which is still marked out by dwarf hedges. It was in the park lying in front of this old residential site that the noble Daffodil, now known as the Countess of Annesley, was found a few years ago naturalised by the thousand, and it is from the park mainly that the bulbs of this variety have been distributed. How, when, why, or whence it came to Castlewellan is one of the many plant mysteries that lie enshrouded in a hazy past. It is not at all an easy matter to give any definite notion of the extent and



Castlewellan, Co. Down. From a photograph by Lord Annesley.

place that have been published from time to time. Even the town of Castlewellan is remarkable, and from elevated points in its vicinity the most varied and delightful views are obtainable. To the east lies the bay of Dundrum, with its rich and fertile valley running down to Downpatrick, while to the northward lie the rugged and picturesque hills encircling Slieve Croob and the woods of Castlewellan demesne itself, with Slieve Donard in the distance, while to the south are all the tops or summits of the great range of the Mourne Mountains that really spring from their ocean bed, just as Mercury is fabled to have sprung full fledged from the head of Minerva. Height after height, rising and falling in all their variety and grandeur—an alpine scene not easily equalled in the British variety of surface to be met with at Castlewellan. Woods, deer parks and Fern-clad hills lie around one in all directions except where there are glimpses of the sea. The red deer raise their heads above the Brake Fern and stare down at you from the slopes of purple Heather, and there are golden pheasants from Japan with their Colchican cousins free and happy in the woods. On the lake and ponds everywhere there is bird life, and, as I have said, the grounds are enriched with hardy trees and shrubs from nearly all temperate regions. The Monkey Puzzles or Araucarias from Chili (shown in the engraving, p. 268) are especially healthy, dense, green, and handsome as their lower branches sweep the lawns, and there are enormous specimens of the Weeping Ash here, one or two having stems 30 feet or so high, as shown in the engraving. Nowhere else except perhaps at Elvaston Castle, in Derbyshire, have I seen the Weeping Ash trees so fine and bold as here. Castlewellan is essentially a tree and shrub garden. There are flowers in plenty in the conservatories and choice Orchids, Palms, Ferns, Pitcher Plants, and dainty Nymphæas also, but it is the more permanent phases of garden art that are followed with zest at this remarkable place, and it is a style that best emphasises the vast proportions and subtle grandeur of the surrounding scenery.

To speak of the rare and well-grown conifers to be seen here would require a volume, and the nursery of young trees and shrubs alone in the sheltered enclosed gardens would require a catalogue to itself; indeed, it really has one, as those who have the privilege of seeing a copy of the red book of Castlewellan will remember. There are rare Water Lilies, other aquatics in the ponds, and graceful Bamboos along their margins or in the conservatory near to the house. It is about a year ago since two friends and myself made a professional pilgrimage to Castlewellan from Newry, a drive of sixteen miles or so *via* Hilltown, over the mountain roads and through the Flax fields. Nothing could have well exceeded our pleasure at the noble and varied views or our satisfaction at seeing such a rich collection of plants well placed in the open air. Arundo conspicua by the pools waved its plumes in the sunny breeze; Parrottia persica and the Virginian and Japanese Vines shone with glowing colour everywhere or hung their empurpled banners on the outer walls, clambering vigorously along wall tops

here, and there was that noblest of all wild Vines of Japan, Vitis Coignetiæ, its great leaves 10 inches or more across and glowing in all shades of bronze, purple and gold. It is a great pleasure to some of us to know that this Vine is established in many Irish gardens, thanks to the owner of Castlewellan. At Narrow-water Park, near Newry, it spreads just now many feet over a high wall and over a Portugal Laurel, its long shoots wreathed with gigantic foliage. One or two of its largest leaves actually measured 11 inches in length by quite as much broad, and were just changing from rich green to shades of bronze and purple; indeed, its leaves as grown there were fully as fine as those brought direct from the woods of Japan by Mr. J. H. Veitch, of Chelsea, and Mr. W. Goldring, of Kew, some few years ago. While speaking of this gigantic, highly-coloured and ornamental Vine, I should like to say that I have often wondered how, when, and by what lucky chance it years ago came to England and was planted at the base of the Scotch Firs, over whose branches it now clambers and dangles in royal wreaths at the Knaphill Nursery of Messrs. Waterer. It would be very interesting to hear Mr. Waterer's history of this plant as it now exists with him. As this Vine is likely to play a very important part in gardens for years to come, I may be the more readily excused for pointing out that it may be increased in several ways, viz.: 1. By layers from plants already established, a slow but sure method if intelligently performed. 2. By seeds imported direct from Japan, where it climbs to the tops of the trees in thin woods and fruits very freely. 3. By grafting dormant cuttings or scions on to cuttings or rooted eyes of the true Grape Vine in the early part of the year.

Rich as Castlewellan is in autumn-time, when leaves are crimson and brown and russet or gold everywhere, it is perhaps in the spring-time when it looks its best. To see its deep green woods jewelled with Anemones and Blue-bells, and bursting buds and young leaflets unfolding everywhere is to feel and to know something of the very poetry of the garden. The Rhododendrons alone are in themselves suggestive of royal splendour, as they glint here and there among the trees beside the wood walks and drives, or rise in bold clumps and informal masses from the mossy lawns. But after all one must see the place in order to appreciate its many-sided and ever-varying charms. F. W. Burbidge.

Kitchen Garden.

GOOD SALADS.

Not only are salads liked during the summer, but they are valuable at all seasons. Of late years there appears to me to be a larger demand for salad, and though it is difficult to provide such after a severe winter if we rely upon out-door supplies, there are now more opportunities for providing supplies by those who have cases for Peaches or other fruits, and much may be done with ordinary movable frames, damp being even a worse enemy than frost. Lettuces are grown so quickly and of such good quality, that there is less difficulty in having a good supply all the year round. I admit by attention to sowing, Lettuce can be produced with little trouble from April to October. My notes will refer more fully to winter and spring supplies. To get Lettuces in quantity during the winter one must rely upon glass, and, as previously stated, only protection is required for winter supplies. As good Lettuce may be had from the open ground well into November, it is the mid-winter supplies which must be provided for. The plants must not be too large, as if fully grown they damp badly and the frost soon injures them, so that even here it is necessary to sow frequently to get suitable material. Many fail with salads by sowing in too large quantities and at too long intervals. A little and often is the best way to get fresh material. For winter, three sowings—one in July, another in August and a third early in September—will give good plants. The July sowing will provide Lettuces well into the month of November, though it may be necessary to cover from early frosts with lights or mats. The August sowing should be a liberal one. The plants can be lifted early in October with a ball, and may be housed in frames or cool Peach cases. These will give the supply after the open-air plants are cut. I place much importance upon the September sowing on a dry sloping border, as these plants will be valuable early in the spring, at a season the Endive is over and salads are scarce. I admit there are losses, but these must be met. Should the plants be killed, no time must be lost in sowing in heat in January, pricking out into a frame on a warm bed. Good plants may be had at the end of March if an early Cabbage variety, such as Golden Queen or Early Paris Market, is sown. To preserve for early spring cutting it is advisable to plant out in October in front of a glasshouse or under a warm wall. To preserve them in severe winters I have placed dry leaves between them. Of course, if glass can be spared it is much better, but in mild winters, plants sown thinly on a well-drained border often live in the seed-beds. These, lifted carefully and planted on a warm bed, soon turn in.

Endive is, next to Lettuce, the most important, and as this can be had good well into the spring, there need be no lack of material for the salad bowl. For mid-winter and early spring supplies the Batavian Round-leaved is much superior to others, having large solid hearts and more hardy. Doubtless the Green Curled is more showy, and may be had in quantity well into autumn, but for keeping it is not suitable. I recently saw a very fine strain of Batavian growing in the R.H. Society's gardens at Chiswick, the leaves being equal to the best Cos Lettuce. To get a long succession, much the same culture is required as for Lettuce—three sowings, June, July, and August. Blanched heads are readily affected by frost, so that the plants must be covered for blanching in the quantities required. Mustard and Cress in variety are so readily grown they need not be noted. Beetroot, a valuable addition, should be small and bright coloured. Tomatoes are now grown nearly all the year round; the small kinds are valuable adjuncts to the salad bowl. Many other aids may be introduced for winter salads. Chicory is good, also Dandelion for spring salads. Water Cress may be used more freely. I have grown this in pots for early use. It grows well in a frame, kept moist. Corn Salad sown specially for winter supplies is useful when Lettuce or Endive is scarce. Sown in June it will give a good supply early in the year. G. Wythes.

A good autumn Pea.—The value of Ne Plus Ultra for autumn supplies is known by most growers who require late Peas. In certain localities it is difficult to keep up a good autumn supply, as the old favourites fail, being badly attacked by insects and mildew. For two seasons I have depended upon Autocrat for late supplies. In our soil, where most late varieties fail, a good autumn variety is a great gain. As Autocrat is a splendid cropper, I shall grow it in preference to the older Ne Plus Ultra, the newer variety being more prolific, dwarfer, and doing well in adverse seasons. It is of very robust habit, much branched, and only 4 feet high. I am much in favour of branched varieties, as they usually produce in pairs, yield longer, and withstand drought better. Autocrat is a blue wrinkled marrow with a large pod, deep green, of nice shape, similar to Ne Plus Ultra in colour, but broader. The quality is first-rate. At this date (September 20) I have a very good crop and of excellent quality. Last season it was also good, the plants producing well into October.—S. H.

Tomato Ham Green.—This variety is much in favour at Hatchford, Mr. Theobald growing it to the exclusion of all others both indoors and in the open air. Heavy crops were ripening on open walls, and I counted clusters with nine large fruits, all big enough for a good market sample. This Tomato is much liked by market growers, and no one can err in planting it largely either for private use or for profit.—J. C. B.

Cardiff Castle Cucumber.—This is a wonderfully prolific Cucumber. Mr. A. Pettigrew, Cardiff Castle, obtained it from a cross between Telegraph and Hedsor Winter Prolific, the latter a small and very handsome variety sent out many years ago from the Royal Nursery, Slough. While of good length, Cardiff Castle is very handsome. A brace of highly-developed fruits would take a good deal of beating on the exhibition table.—R. D.

Spinach for late spring.—Those who have had failures with Spinach sown in the ordinary way, that is in July or August, would do well to sow now. Though there is no produce during the winter, there will be a grand supply in March and later when green vegetables are scarce. Spinach sown late does not get killed by frost, and though slugs may be troublesome they are readily got rid of by dusting the plants with lime, soot, and dry wood ashes in equal proportions. In light soil I find it advisable to roll the soil both before and after sowing. Sow thinly and do not thin till early spring, when the plants may be cut out for use as soon as large enough. From this late sowing during the past four winters I have never been without a good supply of Spinach at a season it is required. There is no need to sow on sheltered borders. The best variety for this purpose I have found to be the Round-leaved Victoria or Viroflay, which produces very fine leaves in the spring and does not run till well into May, when spring-sown Spinach will be producing freely.—S. H.

A good Cucumber.—I recently saw a very fine lot of Rochford's Market Cucumber, a variety not much grown in private gardens. This variety is likely to become a standard kind, as the quality is so good. This combined with its wonderful cropping will place it in the front rank. It is not a large, coarse kind, but of a useful size, the fruit rich green with prominent spines. It is somewhat like Telegraph, but even more prolific than that well-known kind. Last winter I tried it for winter forcing by the side of several well-known kinds, and was highly pleased with it. As a market variety it needs no commendation, its value being well known.—G. W. S.

Savoy Earliest of All.—This is a valuable addition where early Savoys are required, as the produce is particularly delicate and tender when cooked. The variety named is a very compact grower, the heads being conical, the lower leaves resting on the soil. It is a very good vegetable to follow early or midseason Potatoes. I grew it this season, and am so pleased with it, that in future I intend to grow it more largely, doing away with the Green Curled. For gardens of limited space where vegetables in quantity and of good quality are required this Savoy will be found valuable.—S. M.

Yellow Turnips in winter.—These are not much grown in the southern parts of the kingdom, but when there is a great scarcity of vegetables, such as was experienced last March and

April, the yellow-fleshed Turnips sown late will give a supply of good sweet roots. For standing the winter I consider the yellow Turnips invaluable, as if not required for their roots the tops give a wealth of greens at a season green vegetables are none too plentiful. These kinds are specially adapted for heavy clay soils or exposed positions. Among the few Turnips that withstood the severe frost last winter were the Petrowski, or Yellow Finland, Golden Ball, and Orange Jelly. The first named is flatter, and I do not think equals the Golden Ball in quality, but is specially good for sowing for winter greens, using the roots of the last named for storing or table use. It is surprising what severe weather yellow Turnips will stand without being injured. As regards flavour in the winter they are a long way before the white section, being solid when the white kinds are soft, pithy, and flavourless. For some years I depended upon Orange Jelly for the supplies from January to April. Of late I have grown Golden Ball, a very handsome root similar to the Snowball as regards shape and quick growth, and really a delicious winter vegetable. To get good roots and a long supply I usually make two sowings, one in August, another in September, the former for the midwinter supply, the latter for greens or late roots to last till the new roots are fit for use. In storing give as cool a place as possible, choosing medium-sized roots not larger than a cricket ball.—G. Wythes.



Daphniphyllum glaucescens. From a photograph by Lord Annesley.

Potato Boston Q. Q.—I cannot agree with the remarks of "W. S." anent this Potato. Having given it a good trial, I am compelled to abandon it, owing to its ugly deep eyes and, moreover, its bad cooking quality in our soil, which is not favourable for some kinds of Potatoes, being heavy and somewhat retentive of moisture.—E. M.

Runner Bean Prize-winner.—At the recent show held in the Royal Horticultural Society's Gardens at Chiswick I noted most of the leading collections of vegetables contained the above variety. It is a distinct advance on older kinds, being very free cropping and of superior quality, coming into bearing in a shorter time than the older varieties, this making it specially valuable. The pods, long, straight, of fair breadth, and very fleshy, are rich green, resembling in appearance those of some of the best types of dwarf Beans.—S. H. B.

Pickling Cabbage.—Dwarf Blood Red is of very compact growth, very solid, and of remarkably quick growth, colour deep blood-red. The value of this variety is that the plants from spring sowings are superior in colour to those requiring a longer time to grow. Sown in March and planted out in good land early in May there will be fine heads by the early autumn. There is less coarse rib or white portion of stalk in this variety, so that there is a greater portion fit for use. The colour when prepared is all one can desire.—G. Wythes.

A record weight in Onions.—On the occasion of Mr. Henry Deverill's recent Onion show at Banbury, Mr. J. Bowerman, The Gardens, Hackwood Park, Basingstoke, won the gold medal with six bulbs of Ailsa Craig Onion weighing 17¼ lbs. The heaviest of the six weighed 3 lbs. 1 oz., and the next largest was only half an ounce lighter. Mr. Bowerman said that when lifted the largest weighed 3 lbs. 6 oz., but it had lost 5 oz. in drying off. The six Onions were almost perfect specimens of high-class cultivation, very solid and weighty, and admirably finished. Ailsa Craig is a very handsome Onion, of globular shape with pale greenish straw-coloured skin. Of the flat Onions, Anglo-Spanish is the finest, twelve very finely finished bulbs from Mr. N. Kneller, Malshanger Park, Basingstoke, weighing 21½ lbs. Time was when it was thought to be a great feat in Onion-growing to have twelve Banbury Onions weighing 15 lbs.—R. D.

Long *v.* round Potatoes.—In lifting both these descriptions of Potatoes this year I have not been surprised to find that many of the long or commonly called kidney forms, under the influence of a very erratic season, not only have very much grown out, but also become very ungainly. Indeed, I have rarely seen the larger tubers more so. In a season when any quantity of fairly good varieties can be purchased at so low a price as 50s. per ton, it is very clear that a crop much composed of these ungainly tubers must be sold at even a lower price than that, say 1s. per bushel, and that is far below a paying price for other than a wonderful crop. I feel that we have too many of this long type of Potato and that it is time raisers gave them up as breeders, keeping more to the rounder section of varieties, as these have all showed good character and have turned out, so far as I have seen of some seventy varieties in diverse soils, an excellent sample. We have occasional seasons when the long-tubered varieties are of very good form, but they are seasons when growth is constant from beginning to end. Both this season and in 1893 we had weather that gave severe checks to Potatoes, and the ungainliness now so common was then seen also. Beyond this ugliness there is, consequent upon the second growth or elongation which ensues when rains follow after a long spell of drought in the summer, much undue size which is at once objectionable. Then where second growth ensues, the first grown portion of the tubers is essentially different from that of the later growth, and cooking is in such case very unsatisfactory.—A. D.

Trees and Shrubs.

DAPHNIPHYLLUMS.

Although this genus has for some years been represented in a few gardens and nurseries, the fact that mention of it is altogether omitted in even the latest and most popular horticultural dictionaries is sufficient evidence of how little the Daphniphyllums are known in gardens generally. There are, however, besides more tropical species, at least two which may be included amongst the most valuable of hardy evergreens. The genus comprises some twelve or fifteen species, natives for the most part of Asia, their distribution on that continent extending from China, Japan and the Himalayas in the north, to Java and other Malayan islands in the south. One species—D. africanum—is found in West Tropical Africa, where it was discovered by Gustav Mann in 1862. They are all evergreen shrubs or trees belonging to the Euphorbia family, and the flowers of none of them have any pretensions to beauty. The same character of leaf runs through the genus—large and firm in texture, one Malayan species (D. laurinum) having them 1 foot long and 4½ inches wide.

D. glaucescens (the species represented in the engraving) is the best known of all the Daphniphyllums in cultivation. It is widely spread over Northern Asia, and although all the plants in this country have in all probability been brought from Japan, it exists also in a wild state in China, Corea, Hong Kong, &c. Richard Oldham, the Kew collector, saw it in Japan growing to a height of 30 feet, but in this country it has not yet got beyond a shrubby state. The largest specimens are from 6 feet to 8 feet high and form spreading, rounded bushes, wider than they are high. The leaves, each 4 inches to 8 inches long, are of lanceolate shape, pointed, and of a dark green colour above, paler beneath, and more or less glaucous. There appear to be two varieties in cultivation, one of which has the petioles and young wood of a red colour, whilst in the other they are green. The flowers, borne on short axillary racemes in the autumn, are small and inconspicuous; the fruit is black and about the size of a large Pea. Messrs. Veitch obtained a first-class certificate for this shrub in June, 1888.

D. jezoense.—This name does not appear in the "Index Kewensis," but it has been given to

a plant which is dwarfer than the preceding. The only species native of the island of Yezo (Japan) is D. humile, which was first discovered in 1861, and again by Mr. Maries nearly twenty years later. This is probably the plant now grown in England as D. jezoense. It is quite distinct from D. glaucescens, being a much dwarfer plant and having leaves 2 inches to 3 inches long and proportionately broader than those of the larger species; they are vividly glaucous beneath. Professor Sargent says that D. humile is a common undershrub in the forests of deciduous trees in Yezo. A plant grown as D. jezoense at Kew is 4 feet 6 inches through and 18 inches high. The species will prove useful in positions where evergreen shrubs that will keep dwarf without the severe pruning that Laurels and Rhododendrons need are required.

Both these plants are quite hardy in the neighbourhood of London when once they have become fairly established. When young, however, they are liable to be cut back by hard frosts, especially when they are not protected by snow. A little protection should therefore be given for the first few seasons. Bracken or Fir branches laid over them are as good as anything. When they get older and more woody they seem quite impervious to frost except where here and there a late autumn growth has its succulent unripened wood destroyed. They will thrive in any fairly rich garden soil that is not too heavy and wet. Both these species are likely to remain rare for some time unless a large importation of good seed can be obtained. I have propagated them from cuttings put in about July or August, but they are slow and uncertain in rooting. Layering probably would prove a surer method. W. J. B.

The Mountain Ash.—What a glorious display this berry-bearing tree is making this autumn. It matters not what county one travels through, the brilliant berries of the Mountain Ash meet his eye. This tree ought to be used more freely in pleasure-ground planting, for, independent of its beauty in autumn, its general character is highly ornamental. Unfortunately, in dry seasons like the present the brilliant berries soon fall a prey to birds. Amongst country folk a rich display of Mountain Ash berries fosters the belief that there is a hard winter in view. Personally, however, I do not attach any weight to this idea, as generally by November every berry is gone. I have sometimes wondered if there were several varieties of this Ash, as on some trees the berries when ripe have a much darker, richer colour, but this is perhaps due to soil and situation.—J. C.

Fruit and Vegetable Crops.

SCOTLAND.

Brahan Castle, Dingwall, Ross.—Fruit crops are very good all round this quarter this year, but the dry weather did not affect us here in Ross. Apples very good. Pears above average. Plums heavy crop. Apricots good average, and all small fruits very good. The great drawback with orchard Plums in the north is the autumn frosts, which completely spoil them just when ripening. Jefferson I find both for appearance and flavour is the best dessert Plum, and Victoria for kitchen use.—Geo. Simpson.

Ardoe House, Aberdeen.—The fruit crops in this district have been good. Early Strawberries were rather small owing to the continued dry weather; later ones are a heavy crop, also Gooseberries, Currants and Raspberries. Apples are thin. Plums a fair crop. Cherries good. Peaches are a good crop on walls with a little protection, but not much grown in this district. The crops all suffered very much in the early part of the season, but since the rain came vegetation has improved greatly and crops are turning out well.

Potatoes are an excellent crop and of fine quality; no appearance of disease. Early Cauliflowers have been a failure all round here with canker. The past winter was a very severe one, many things being killed outright. Shrubs have suffered the most. Common Laurels have been killed to the ground. Barberries, Cedars, &c., have all suffered more or less. Roses on walls were sadly destroyed, but those in beds did not suffer so much owing to their being covered with a good depth of snow during the hard weather.—John Hay.

Drumlanrig Gardens.—All small fruits such as Currants, Gooseberries and Raspberries are in great abundance and fine in quality. Strawberries, owing to the drought in the early part of the season, were smaller than usual, but of fine quality. Plums, Cherries and Apples are plentiful.

Potatoes (as they always are in dry, warm summers) are healthy and good. Most vegetable crops, owing to the dry weather, were checked and retarded, but with the recent heavy rains they are now making rapid progress.—D. Thomson.

Brechin Castle, Forfar.—The fruit crops here are very fair taken as a whole. Apples are an average crop, but Pears are under the average. Plums are not a heavy crop; those bearing best are Victoria, Kirke's, Rivers' Early and Orleans. Cherries are a fair crop and small fruit of all kinds plentiful. Strawberries have done well, the rain just coming in time to save the crop. Wasps are quite a pest this season, attacking all ripe fruits.

Vegetables have mostly done very well. Early Peas were very good, but later sowings are not promising so well, filling slowly with this wet weather. Early Cauliflowers buttoned a good deal during the drought, but later sorts are doing well. The maggot has been very bad on Onions this season, but Carrots, on the other hand, are very healthy. Potatoes are an excellent crop, although the quality is not first-rate. Disease has not begun to show yet.—W. McDowall.

Carberry Tower, Musselburgh.—The fruit crops in this district with a few exceptions are this season very good. Apples and Pears rather thin, although the trees looked well when in bloom. Plums fair generally, Victoria extra fine. Cherries, both Morello and sweet, enormous crops. Strawberries were a good crop, the fruit fine and of good flavour, and lasting longer than usual. Gooseberries, Red and Black Currants very plentiful. Raspberries scarce, having suffered much from severe frost last winter.—D. Kidd.

Dochfour Gardens.—All small fruits, Strawberries, Raspberries, Currants, Gooseberries, &c., excellent crops, but inferior in flavour. Apples, Pears, Plums and Cherries only about one-fourth of general crop. Wall fruit thin, but of good quality and large size.

Vegetables splendid crops, especially Peas, Potatoes, Cauliflowers, Beans and indeed all green crops.—R. Stewart.

Arbuthnot, Fordoun, N.B.—The small fruits here, including Strawberries, Raspberries, Gooseberries, and Currants of all kinds, have been an extra heavy crop, also of extra size and quality—in fact I have never seen a heavier crop nor larger fruit of Currants. Apples on standards a failure, only a very few here and there. Pears on walls I never saw worse; as standards, Pears do not do here at all. An average crop of Apples on wall trees.

Potatoes are a very good crop, of large size and of excellent quality. Peas have done remarkably well this season. Potatoes and Peas seem to have enjoyed the very dry and hot weather we had in May and June. We have had abundance of rain now.—J. M. Gairns.

Fyvie Castle, Fyvie.—We had a very severe winter, and during the month of January we registered 519° of frost; the mercury came down to 8° below zero on the 9th, 11th, and 25th of the month, and during the twenty-eight days in February we registered 598° and coming down to 18° below zero, or 50° of frost, on the 11th and 13th of the month, which did enormous damage to the fruit trees and shrubs. The majority of the fruit-buds got nipped, and the crop this year is but very light. Small fruit, such as Currants, Gooseberries, and Strawberries, are a good average.

Potato crops are good and very promising.—Simon Campbell.

Broxmouth Park, Dunbar.—We have a heavy crop of all sorts of fruit this year, assisted no doubt by the scarcity of last season. Our most reliable kinds of Apples, and which are bearing well, are Keswick Codlin, Lord Suffield, Stirling Castle, Warner's King, Hawthornden, Golden Spire, Ringer, Golden Noble, Blenheim Orange, Cox's Orange, King of Pippins, Worcester Pearmain. Pears are an average crop, also Apricots, although not equal to last year. Plums are good on young trees on walls of Victoria, Jefferson, Kirke's, and Green Gage, and I believe from orchards Victoria might be grown in this locality to some advantage. Morello Cherries are looking well and are a nice crop. Small fruits are in great abundance. Strawberries suffered for a time from the want of rain. Raspberries are plentiful and fine, and extra large upon Superlative. Gooseberries are breaking down the bushes. Red and White Currants are very fine, but Black Currants are not so large as usual.—Wm. McKelvie.

WALES.

Cardiff Castle.—The past severe winter damaged a great many trees and shrubs in this district. In the pleasure grounds here dozens of large Cupressus macrocarpa from 50 feet to 70 feet high were all killed by the severity of the frost, and the younger trees of the same species suffered equally; not a single plant in the most favourable position escaped. Several of the finer varieties of conifers which were previously considered hardy succumbed to the cold blast. Some of the Vines trained on the castle wall here – twenty-six years old and 40 feet high—were killed to within a few feet of the ground, while those in the open vineyards were not injured in the least. The Raspberry canes growing in open quarters in the garden here were killed to the ground. Tea and other Roses were badly injured, and in some cases killed outright. Vegetables of all kinds were badly cut up and the Broccoli all destroyed, with the exception of Veitch's Model. The small rainfall of the present year (11·84 inches to the end of June) and the long-continued drought in May and June were very trying to vegetable and fruit crops of all kinds, but since the heavy rainfall in July they have improved wonderfully. The fruit crops, more especially Apples and Pears, are the best we have had for several years. The weather proved favourable for them during the flowering season and almost every bloom set, but owing to the enormous set and the long-continued drought that followed, a great many dropped after they had grown to the size of pigeon's eggs, much to the relief of the over-burdened trees. Of Apples, the following varieties have had to be propped up to keep the branches from being broken down under the great weight of fruit: Lord Suffield, Lord Grosvenor, Cox's Orange Pippin, Ecklinville, Worcestershire Pearmain, Peasgood's Nonsuch, Alfriston, Gloria Mundi, Irish Peach, and several others. Wellington, Blenheim Orange, Lane's Prince Albert, and, indeed, most of the varieties here are bearing excellent crops of fine clean fruit. The crops of Pears, both on wall and pyramidal trees, are exceptionally good, and the following varieties, trained as pyramids in the open quarters of the garden, have had to be propped up with long Larch poles and roped all round to save them from being broken down: Pitmaston Duchess, Jargonelle, Williams' Bon Chrétien, Vicar of Winkfield, Beurré Bosc, Beurré d'Amanlis, Beurré Diel, Marie Louise, Thompson's and many others. Of

Plums growing in the open there is an average crop. The best are on bush trees of Victoria, Kirke's, Bryanston Gage, Coe's Golden Drop, and Transparent Gage.—A. Pettigrew.

The Hendre, Monmouth.—With the exception of Apricots, all kinds of fruit trees blossomed freely this season. Pears and Plums, however, received injury from frost, and it was noticeable that the trees on east walls, and consequently exposed to the sun's influence early in the morning, suffered most. In ordinary orchards Apples and Pears are plentiful, although the crops are partial. In our fruit garden, which was planted with pyramid trees in Nov., 1893, the crops are good. Of Apples the best are Baumann's Red Reinette, Cellini, Frogmore Prolific, Gascoigne's Seedling, Grenadier, Lane's Prince Albert, Seaton House, Sandringham, Schoolmaster, The Queen, Tyler's Kernel, Warner's King, Brownlees' Russet, Cox's Orange Pippin, King of the Pippins, and Worcester Pearmain; of Pears, Catillac, Conseiller de la Cour, Doyenné du Comice, Durondeau, Louise Bonne of Jersey, Pitmaston Duchess, Souvenir du Congrès, and Beurré Fouqueray. Of Cherries, May Duke, Late Duke, and Morello; and of Plums, Coe's Golden Drop, Transparent Gage, Jefferson, Kirke's and Victoria are all very good. Strawberries, Raspberries, Gooseberries, and Currants are excellent in every way; the crops abundant and individual fruits remarkably fine. The winter moth has been troublesome in some orchards where no means were adopted to check it; black fly had to be kept under upon Cherries; caterpillar upon Gooseberries, and honeydew upon Currants. Plums have, however, remained perfectly clean. The late rain has caused an increase in the size of Apples and Pears, and improved the appearance of the foliage of all fruit trees. No injury to fruit trees accruing from the late severe winter has been observed. Apricot trees are in perfect health, as are young Peach trees which were planted last autumn.—Thomas Coomber.

Crosswood Park, Cardigan.—The fruit crop in this neighbourhood is above the average, especially Apples. The trees are loaded everywhere. Currants and Gooseberries were very plentiful, also Raspberries. Strawberries suffered very much from the long-continued drought; although they had a splendid show of blossom, it did not come to perfection and the crop was a short one, although the flavour was very good. Pears do not appear to have suffered from the hard winter; they are carrying a good crop. They began to drop with the drought, but since the plentiful rains they have improved wonderfully. The Apples had begun to drop before the rain, but are now swelling fast and will be a very heavy crop. Cherries were much above the average, especially on the walls, and of excellent flavour. Peaches and Nectarines are about an average, but the flavour is never very good in this district. Apricots are below the average, and seem to have suffered most from the hard winter, very little blossom showing. Plums are a heavy crop both in the open and on the walls.—R. C. Williams.

Picton Castle, Haverfordwest.—The fruit and vegetable crops in this neighbourhood are amongst the best we have had for some years, in spite of the severe winter and the dry season we have had. Fruits crops generally have been and are good, particularly Apples, Cherries, Peaches, Nectarines and small fruits, the only exception being Raspberries, the canes of which were injured by the severe winter. Strawberries were a most abundant crop and particularly good. Pears are slightly under average, as also are Plums, which are not grown very extensively in this neighbourhood.

Vegetable crops are also very satisfactory in our heavy deep soil, the dry season having been rather favourable than otherwise. Potatoes are yielding a very heavy crop and no disease has appeared. Onions and Peas are also good.—J. Dumble.

Mostyn Hall, Mostyn.—We have had fine crops here. Plums are an exceptionally heav crop. All wall trees are cleaner here than I have seen them for the past few years, which, I think, is due greatly to not getting such easterly winds in the spring as we generally do. A great deal of fruit was beginning to fall through the drought, and perhaps it is as well it did. The rains we have had recently have greatly helped the fruit, and I expect Apples, Pears and Plums will be very fine.—J. Barnard.

Llannerch Park, St. Asaph.—The fruit season here this year is exceptionally good, Strawberries especially. Apples are good. Pears not so plentiful as last year. All bush and stone fruit above the average. The past winter killed several plants and shrubs that have not been hurt before. A dry, hot summer suits fruit trees here well, as the soil is very stiff with a clay bottom.—J. Young.

Penrhos Gardens, Holyhead.—Anglesey is not a fruit-growing county, but in various parts where shelter is obtained very good crops of fruit are produced. Apples this year are much above the average. The most abundant bearers are Beauty of Bath, Ecklinville, Lord Suffield, Warner's King, Duchess of Oldenburg, Devonshire Quarrenden, Sturmer Pippin, Peasgood's Nonsuch, Dutch Mignonne, Worcester Pearmain, Lane's Prince Albert, Bramley's Seedling and Frogmore Prolific. Pears are under the average except some of the most prolific kinds such as Beurré Giffard, Souvenir du Congrès, Beurré d'Amanlis, Marie Louise, Doyenné du Comice and Winter Nelis. Cherries a very good crop, especially Morellos. Strawberries produced very good crops and fine; these were mulched early and withstood the drought remarkably well. Gooseberries, Raspberries and Currants are abundant. The Plum crop here on walls is much under the average. The two first to ripen are Early Prolific and The Czar. Kirke's, Jefferson and also Victoria are bearing very fair crops. Victoria is the most certain bearer.—F. W. Everett.

Vaynor Park, Montgomeryshire.—The fruit crop here is a very good one, more especially Plums, Apricots, Peaches and Nectarines. These are plentiful and promise to be excellent in quality. Cherries and Strawberries are a most abundant crop. Raspberries are a fair average crop. Gooseberries and Currants are a good average crop. Pears are below the average. Apples are plentiful, but fruit small. The Walnut trees are bearing heavy crops. Filberts and Nuts are thin. I find all kinds of Plums do well here. Some of the trees were planted about seventy years ago. I have known them fifty years, and I may say if there are Plums anywhere, there is always plenty here.—R. H. Smith.

Glanafon Gardens, Taibach.—The Apple crops without exception are unusually good. Pears, both on standards and walls, are very fine and good. Indoors the yield from Peaches and Nectarines has been very heavy, the fruit being remarkably fine and well flavoured. The outdoor trees are heavily laden, while the trees are healthy where water could be supplied to them during the drought experienced in the early part of the season. Plums are not grown as standards or pyramids in this district, but the wall trees bear very heavy crops. The Cherry crops on walls and standards are very good. Currants were unusually fine, while the bushes were remarkably clean and healthy. The Strawberry crop was excellent, surpassing the yield of any previous year. The fruit was exceptionally fine. Laxton's Noble and Vicomtesse Héricart de Thury stood the drought well, and were among my best. The Gooseberry trees suffered badly from the severe winter, and the crop was quite a failure.—Henry Morris.

The Gardens, Slebech Park, Haverfordwest.—Apples are a most abundant crop, all varieties alike; the fruit is clean and of a good size. The weather during the blooming period was dry. Pears are a very thin crop. We have had very heavy crops the past two seasons, and the trees appear to be to a certain extent exhausted. Josephine de Malines I find to be the most continuous bearing variety in this district. We have also on some of the trees fair crops of Marie Louise. Cherries were a very good crop, especially the Morello. The Cherry is not much grown in this district, as it seldom succeeds. Peaches and Nectarines are almost unknown as outdoor fruit in this district; only an isolated tree here and there partially succeeds. Apricots the same; nobody plants them outdoors, but, like Peaches, good crops of them are produced under glass in this county. Small fruits were a very good crop with the exception of Gooseberries, which were in many gardens almost a failure. Strawberries a splendid crop of good clean fruit, but soon over owing to the drought.—Geo. Griffin.

Bodnant Gardens, Eglwysbach, Denbighshire.—I am pleased to be able to report most favourably on the fruit crops in this neighbourhood. Apples are an excellent crop; I have had to thin them considerably. The same may be said of Plums, with the exception of a small black variety, which is grown rather extensively in this district. Pears on walls and sheltered positions are a fair crop; others not so favoured are very poor. Apricots a moderate crop. Peaches and Nectarines I do not grow in the open air, but within a few miles (on the coast) they are grown with success, and are this season bearing well. Morello Cherries very good. Strawberries set well and early pickings were very fine, but later gatherings were small owing to the drought. Gooseberries, Currants, and Raspberries all bore excellent crops of fine fruit. Walnuts and Filberts are rather light. The crops with the exception of Strawberries do not appear to have suffered from the drought in May and June.—J. Saunderson.

IRELAND.

Fota Island.—The fruit crop in this neighbourhood is quite up to the average. Strawberries, Gooseberries and Currants abundant, but in consequence of the drought in the early part of summer the Strawberry season was a short one; many plants died from the want of rain. The popular variety of this county (M. MacMahon) suffered most. Apples abundant, but fruit rather smaller than usual in consequence of heavy crop. Cox's Orange Pippin, Kerry Pippin, Mr. Gladstone, Blenheim Orange (the first season we have had a crop of the last named for twenty years), Bramley's Seedling, Bismarck, Lord Grosvenor, Tom Putt, Lane's Prince Albert, Loddington Seedling, Tower of Glamis, The Queen (very fine), Warner's King, Annie Elizabeth, and Small's Admirable are amongst our best. Pears an average crop, but all early kinds poor in quality; Marie Louise, Glou Morceau, Beurré Diel, and Beurré d'Amanlis small. After the spell of dry, tropical weather in June, two months of cold, sunless, wet weather followed, which caused the Pears to crack and spot. Apricots failed to ripen. Peaches and Nectarines heavy crop of fine fruit, but lacking in sugar. Plums a good crop; many rotted unripe on the trees. Morello Cherries an excellent crop.—W. O.

Glenstal, Limerick.—The present year will be remembered as a year of plenty in these gardens. Fruit with but few exceptions is considerably above the average. Taking them in the order of ripening, Strawberries were an enormous crop, the berries exceptionally large, and, thanks to the glorious sunshine, of which we seldom get a fair share, the flavour was first-class. Black, Red, and White Currants were a very heavy crop. It would appear, however, that a moist season suits the Black varieties, but as the berries were smaller than usual, and, moreover, ripened prematurely, the drought did not affect the Red and White varieties. The same may be said of Raspberries, which were and still are good, while the canes made this season are remarkably fine. Gooseberries are without doubt the heaviest crop I have ever seen; they, however, are a light crop throughout the district generally. Pears on walls are a first-rate crop, but pyramid trees have a light crop with the exception of Williams' Bon

Chrétien, which is always a certain cropper here as a pyramid. All young Apple trees are heavily laden with very fine samples of fruit. Some old standard trees cast a good many fruit a few weeks since, but there is still a good crop left. I have recently visited several gardens in Limerick, Clare, Tipperary, and the same remarks are applicable in all cases, save in that of Apples on standard trees; these are all bearing heavy crops everywhere. I have never, however, seen a heavier crop of good Apples than I saw in a large orchard at Dolla, Nenagh, Co. Tipperary; the trees were both large and old. Apricots and Figs are very light crops. Peaches, on the contrary, are carrying very heavy crops; the fruits, too, individually are larger than usual. Plums are a very light crop on standard trees; in fact, they are never good under that system of culture. Victoria on walls is annually a certain cropper; though only second-rate in flavour, it is a most useful cooking Plum. Green Gage and Magnum Bonum are very lightly cropped; in fact, no Plum I have tried in our mossy soil is satisfactory but the Victoria. I do not consider this a good soil for Plums owing to a deficiency of lime in the soil, that being most essential to ensure success during the stoning period. I have not tried any of the new Plums owing to the unsatisfactory results from the old varieties. Morello Cherries were a very good crop, but the sweet varieties were a poor crop. Taken all round, it will be seen the fruit crop is a good one. Nuts, I may add, are slightly under average. The result of the past severe winter is in every way satisfactory, while the drought has done but little harm in gardens.

Onions are a very fine crop: so are Peas, French and Runner Beans. Turnips are excellent on north border, but Spinach has bolted very quickly during the wet weather. Beetroot came up indifferently during the dry weather; there is, however, sufficient for a crop, and it is doing well now. Some of the early Celery, though regularly watered, has bolted; the main crop is most promising; the same may be said of winter greens, &c. Potatoes, the staple crop of Ireland, are an excellent crop, and, what is of greater importance, of first-rate quality; in fact, some could not possibly be beaten, notably old Ashleaf, Cottager's Red, and Reading Ruby.—R. Weller.

Clontarf Castle, Co. Dublin.—The fruit crop here is most abundant, and I may say the same for all this district. Apples, Pears, Plums and all small fruits, particularly Raspberries, often a doubtful crop here, are good. The fruit will hardly be so large as two years ago, but if we get a few weeks of hot sun to finish it off for keeping, we will in this district have no reason to complain of the crop of this year.—J. Doran.

Grantstown, Tipperary.—The Plum trees are laden with very fine fruit. The Apples are very satisfactory here and in surrounding gardens. If the fine weather we are having continues, the flavour and keeping properties will be greatly improved. Pears are fairly plentiful; Williams' Bon Chrétien is rather light. Peaches are excellent and remarkable for their good flavour and high colour; Cherries good and well flavoured. The bush fruit on the whole is very good.

Vegetables are very fair with the exception of Peas, which were very poor.—H. Kelly.

Castle Bellingham, Louth.—The fruit this year in this locality is only a medium crop. Black Currants not up to usual average; the same may be said of Pear and Apple crops. I believe that the heavy frosts at the time these were in bloom had much to do in producing the above results. We do not grow any of the new kinds of Plums about here, but I am sure that a more extensive cultivation of the Plum in this country would greatly add to the value of garden produce. The soil in this neighbourhood is a gravelly loam, and, except in very dry seasons, fruit trees of all kinds do very well. Even in ordinarily dry seasons I find it difficult to obtain good crops of Strawberries. This year I paid particular attention to watering the beds, and so obtained a good crop.

Potatoes appear to be everywhere an abundant crop and of good size, and no disease so far. They are excellent in this garden, but I have heard complaints in other directions of them being more soapy than they have been for some years.—E. Dorman.

Mitchelston Castle, Cork.—Small fruit was much above average both in quantity and quality. Strawberries were exceptionally fine. Pears and Apples are over average. Plums also are very fine, though a little deficient in flavour on account of so much rain. A dry or moderately dry summer is best suited for fruit here, as the soil generally is a deep retentive loam on the blue limestone. In a wet season Pears and Plums crack and the flavour of all fruit is deficient.—R. Wilson.

Antrim Castle, Antrim.—Apples, Pears, Plums and Cherries are all very good here. The Plum crop is also good. Gooseberries, Raspberries, Red and Black Currants and Strawberries have all been good; the last rather small, owing no doubt to the very dry time after the fruit was set. Grapes, Peaches, Nectarines, Melons, Cucumbers, Tomatoes, &c., inside are all good.

Vegetable crops on the whole are looking remarkably well, with the exception of Potatoes, which were all cut down to the ground by the frost on June 13; consequently the crop is not so good as it probably would otherwise have been. I have seen no disease yet.—Francis Allen.

Castlewellan.—Apples, Cherries and Plums are under the average. Small fruits very abundant. Gooseberries, Currants and Raspberries very fine. Strawberries plentiful, but small; owing to the long drought they were soon over. The following varieties of Pears on south and west walls are over the average and the fruit very fine: Pitmaston Duchess, Marie Louise, Emile d'Heyst, Fertility, Gansel's Bergamot, Jargonelle, Louise Bonne of Jersey, Magnate, Autumn Bergamot, Beurré Capiaumont, Beurré Giffard, Beurré Superfin, Clapp's Favourite, Conseiller de la Cour, Marie Benoist, Doyenné du Comice, Duchesse d'Angoulême, Williams' Bon Chrétien, Beurré Bachelier, Beurré d'Amanlis and Beurré d'Aremberg.—Thos. Ryan.

Bessborough, Kilkenny.—We have a very fine crop of Apples, the best for some years, and all the orchards around us have splendid crops. The fruit is of a very good colour, thanks to the fine weather. Pears a very light crop. Peaches under glass very good. Morello Cherries a very fine crop. Currants, both Black and Red, and Raspberries very fine crops. Gooseberries extra good, Whinham's Industry and Warrington being the best.—William Clarke.

Curraghmore, Co. Waterford.—Taking everything into consideration, our fruit and vegetable crops this year are very good. We did not suffer much from last winter; only once the thermometer registered 28° of frost, and fortunately we had a downfall of snow the day before. The dry spring kept everything back. We also had a few late frosts, but not so bad as in Scotland and England, our last being May 22 and only 2°—Apples not being forward enough. We have a very heavy crop, Keswick, Hollandbury and Annie Elizabeth being our best crops, whilst Ribston, Cox's Orange and Hawthornden are very good. Pears are fair. Plums average. Peaches very good inside and out. Apricots poor. Cherries average. Small fruits were extra good. Strawberries I never had better in flavour, size and quantity.—Thos. Singleton.

Belvedere House, Mullingar, Westmeath.—The first two months of this year will long be remembered for the severity of the weather and the amount of damage done to trees, shrubs, and vegetables; even the Furze, Laurel, and evergreen Oak suffered severely, and in a damp situation one large tree of the last was killed. A fine specimen Chamærops humilis, 17 feet high, which I was afraid had been killed, I am glad to say is growing strongly from the crown. Its roots were protected by Bracken. Tender shrubs planted in a western aspect suffered much less than in any other position. All the Brassica family suffered severely. Of Broccoli, Dickson's Late May, Veitch's Model, and Leamington suffered the least. The Victoria Improved Round Spinach also stood well. We registered 27° of frost on the night of February 5, 2 feet from the ground. Considering the very dry spring, crops are doing very well, the rains coming in time to swell up the fruits, and the trees are making good growth; altogether the fruit crop is over the average, excepting the Pear, which is almost a failure.

Early Potatoes turned out well and of good quality; late ones look very promising and there are no signs of disease.—James Bayliss.

Garden Flora.

PLATE 1034.

CYMBIDIUM EBURNEO-LOWIANUM.

(WITH A COLOURED PLATE.*)

No hybrid Orchid of recent years has created so great an amount of interest as this charming variety. It is in every way distinct from both of its parents, yet has a certain amount of resemblance to each. Taking into consideration the two noble species to which it owes its origin, it would indeed be a surprise if the offspring were not itself also of equal excellence. As Cymbidium eburneo-Lowianum becomes more plentiful it will most assuredly be greatly sought after by Orchid lovers who are in search of the best kinds in each respective genus. A goodly number of plants has already been distributed, and no inconsiderable quantity has flowered with the raisers, Messrs. J. Veitch and Sons, at Chelsea. When first described in 1889, the year in which a first-class certificate was awarded to it as a new and noteworthy plant, the spike from which the description was written bore three flowers, but it was then predicted that with greater strength there would be an increase. This has proved to be a fact, for this spring six flowers in one instance were counted, whilst in several cases the spikes have borne as many as five. There has also been an advance in point of size, as I have noted several on the plants exhibited of late that were much larger than those of either of the parents. This was especially so in the case of the fine plant in the possession of Mr. F. Hardy (see The Garden for March 16 last, p. 190), which was specially noted at the time. I look to see a greater increase still in point of numbers, although it may not be possible to approach that of C. Lowianum, the seed parent of the hybrid in question. It is the finest hybrid Cymbidium yet raised, as well as one of the finest of all hybrid Orchids. The pseudobulbs and leaves are intermediate between those of the two parents (approaching more nearly in form and contour those of C. Lowianum), with the yellowish striations at the base of the latter characteristic of C. Lowianum. The racemes are longer than in C. eburneum, and bear from four to six or more flowers. The flowers have nearly the same shape as those of C. Lowianum, but are much larger. The sepals and petals are similar and sub-equal, light nankeen-yellow; the petals and lateral sepals spreading, the dorsal sepal bent forward; the lip is nearly, as in C. Lowianum, ivory white on the inner side, with a V-shaped red-crimson blotch on the reflexed front lobe, the lamellæ of the disc bright yellow. The column

* Drawn by H. G. Moon for The Garden in the garden of Baron Edmond de Rothschild, Armanvilliers, near Paris, February 15, 1894. Lithographed and printed by Guillaume Severeyns.


CYMBIDIUM EBURNEO-LOWIANUM

is ivory white with some red spots at the base near the front.

By the courtesy of Mr. Veitch I was shown what in this instance is of especial interest, viz., the result of making C. eburneum the seed parent instead of C. Lowianum, as hitherto alluded to. The progeny resulting from this cross has approached more nearly to C. eburneum, inasmuch as there is a tendency to yield two flowers only to the spike, as in that species; there is also a slightly less amount of the nankeen-yellow, whilst the inner part of the column is dotted with minute spots throughout; the foliage also is shorter, thus again inclining more towards the same species. The size of the flowers is, however, retained, as in the opposite cross, so also is the general outline. The treatment under which the parents thrive will also suit the offspring. The growth in both crosses is all that one could desire, that of the former being nearly as intermediate as possible, whilst in the latter it is somewhat shorter, the plants being of graceful habit. The disposition to either make back breaks or duplicates is also much in its favour. C. eburneum, it should be noted, was introduced fifty years ago from the East Indies (a wide range), whereas C. Lowianum comes from Burmah, having been sent over in 1877.

Orchis.

Howth Castle, near Dublin. — Howth Castle is one of the most beautiful places in Ireland, with its ancient garden containing unique Beech hedges of gigantic height, its Rhododendrons among the rocks and Brake Fern, and its magnificent views over the Irish Sea. The Gloire de Dijon Roses here are as big as tea saucers, and hedges of Lavender and Rosemary, Sweet Brier, and beds of Mignonette make the place as sweet as Rose gardens in Cashmere. To see the common Honeysuckle growing up the trees to a height of 50 feet or 60 feet here and wreathed with flowers is a sight rarely to be equalled, and the whole place is a paradise of wild flowers.



Flower of Cymbidium Lowianum.

The Week's Work.

FRUIT HOUSES.

Early Vines in pots.—These should now be in the open if required to force early, and any pruning required should be no longer delayed. The canes should be tied up to a fence or wall to get thoroughly matured, and as they require less moisture for a time till the leaves fall, it is well to protect from heavy rainfall. With such favourable weather as we are now experiencing, the Vines should not be allowed to suffer from the want of the necessary moisture. In securing to the wall it is well to take care that the canes do not get twisted by strong winds, as they soon suffer if the bark is injured. It is well to let the leaves drop off naturally, and if pruned as advised above, that is, the lateral growths cut back, the remaining leaves will soon fall. In standing the plants in exposed quarters it is well to protect the roots from full sunshine by partially plunging them, or placing boards or litter to shade them. When the Vines are introduced into their fruiting quarters, if hot water is the heating agency, a good thickness of turf over bricks should be placed on the pipes, and as a strong heat at the start is not necessary, I have found fresh leaves one of the best materials for plunging. If manure alone supplies the heat, great care must be taken that it is a steady heat, and here again a liberal mixture of leaves with the manure will be beneficial. Young Vines need more heat at this season, so that 55° by night is none too high, allowing 10° higher by day and a free rise by sun heat, syringing several times daily to assist in breaking the buds. A genial bottom heat will likewise be necessary, but excess must be guarded against, and if a liberal portion of leaves is used, this being added to as required, there will be no fear of scorching the tender roots.

Early permanent Vines.—In many gardens small houses of permanent Vines are now forced instead of pot Vines, and though the work advised above for pot plants is applicable here in certain details, it is necessary to vary the practice as regards ripening and exposure. Old Vines, if they have been forced regularly, are more readily ripened than young canes, and in no case do I advise pruning till the sap is flowing downward or when the growth has ceased. It may be necessary to shorten the growths, and by so doing time will be gained, as it allows more light to reach the canes and the final pruning may be done much earlier. It is a good plan to shorten lateral growths quite one half at this date, and terminal growths may be reduced likewise if well matured, as I find it checks bleeding by so doing. Vines required to produce ripe Grapes in April should have been prepared by shortening back, and must now be pruned to the required bud and prepared for the work, thoroughly cleansing the rods, as should insect pests have been troublesome now is the time to wage war against them and prevent future attacks. The rods should have the rough bark removed after pruning is complete. I do not advise scraping, which is sometimes practised. Merely remove useless or loose bark, and rely upon thorough cleansing by scrubbing the rods with a strong solution of soapy water, painting afterwards when dry. I am aware even this scrubbing and painting are not sufficient to remove mealy bug, but it will remove so many, that it is an easy matter to get rid of any left if the Vines are carefully looked over daily when the bunches are forming and after thinning. I have seen so many Vines injured by applying strong solutions of paraffin and tar in large quantities, that it is well to rely upon milder methods. I admit tar in suitable proportions is very beneficial in destroying bug, and have used it to advantage. A good mixture for painting Vines is sulphur, lime, and tobacco water, with a liberal portion of Gishurst compound mixed in tepid water, the whole to form a thick paint. This should be well rubbed into the bark, all crevices being stopped with the solution. After cleansing and painting, preparation must be made for starting. The surface soil if poor should be removed, new material, such as good loam with a liberal portion of bone-meal being added, and in the case of old Vines some fertiliser also given, previously removing the surface soil. It is well to see that the border is thoroughly moist, as with the favourable autumn weather we have experienced borders have got much drier than usual. Though the surface is moist it is well to soak thoroughly before starting the canes. At this season the roots may be given a good soaking with rain water from the tanks. Much the same routine is required as advised for early pot Vines. After closing the house for a short time it will well repay the cultivator to give warmth by covering the border with warm litter with which a liberal portion of fresh leaves has been mixed. I am aware the roots will be some time before they start at this season, but the warmth greatly assists the Vines to break freely, maintains a moist temperature, and saves much syringing. I do not advise forcing Vines for very early produce where the roots are outside. If possible it is well to force small houses, which can be better managed, as later on when the Vines require more warmth much may be done in severe weather by covering the glass on the outside to retain warmth.

Worn-out Vines.—Vines that have become unprofitable by overcropping, age, or other causes may be made to answer a double purpose if forced now, and thus provide early Grapes and make room for new Vines. Of course to force, say, early next month they should have been given a good rest if possible, but it cannot always be done, and the means at hand must be employed. Only a short rest may be given. In such cases prune back, and in doing this work it will be necessary to cut to the best bud, not pruning hard, as there is no need to study effect, the Vines being destroyed as soon as the crop is cleared. Every chance should be taken to get all the fruit possible, and of course it will not be necessary to clean the Vines so particularly as if they were permanent. If there is no bug or other pest, the barking and painting over may be omitted. A good dressing of Gishurst would be sufficient, and top-dressings may be given later on if necessary. These Vines will need a little extra heat at the start should the weather be dull and moist. Much may be done to forward the crop by placing manure on the surface, and in case of outside borders a liberal covering of manure and fresh leaves will be of great benefit. It is well to cover over freely after the warm material is placed on the border with long straw or boards to throw off heavy rains and snow. The crop obtained in this way will allow the house to be planted next May with young Vines. To save time at the planting season it will be well to do the necessary repairs to the house as soon as the Vines are pruned and to get the soil ready for the new Vines. The compost will be in better condition if the turf is cut now and stacked for the purpose. I like to place layers of horse manure between the layers of turf if the loam is poor. It is then in nice condition for planting and in much better condition for the roots than when large quantities of fresh manure are used at planting.

Late Vines.—The most important work with late Vines will be preserving the fruit. To get bunches of the best quality all through the winter, it will be necessary to give some warmth to raise the night temperature and dry up excessive moisture; a very little fire-heat will arrest decay. It often happens that vineries are used to shelter Chrysanthemums, and with continued supplies of moisture to the plants the Grapes are injured. I would in such cases advise cutting the crop and bottling the same, as the fruit will keep much better in a cut state if the bottles are housed in a regular dry temperature and charcoal used freely in the water. After cutting, a thorough soaking

of water should be given to the portion of borders not covered by plants, as though there are regular supplies to the Chrysanthemums, a portion of the border near the base of the canes does not get moisture and the roots suffer. In the case of Grapes required to hang till the beginning of the year and late in colouring, every means should be taken to assist them. Here fire-heat will be necessary daily, and if the lateral growth is at all thick it should be thinned so as to freely expose the fruit and a genial warmth maintained. Ripe fruit will need to be frequently gone over with the scissors and bad berries removed, as one diseased berry soon affects those surrounding it. Large kinds of Grapes, such as Gros Colman, also need attention as the season advances. In their case it is well to go over large bunches, removing berries badly placed or much wedged against each other if required to hang till new Grapes are ripe. In the preservation of ripe fruits always whenever practicable admit air with a free circulation of warmth, and keep the house as free as possible from damp, giving a little air on the top ventilators at night as long as there is plenty of healthy leaves and the weather favourable. Should water at the roots be necessary to prevent shrivelling, select a bright day so that the moisture can dry up before nightfall.

G. Wythes.

KITCHEN GARDEN.

Late summer vegetables.—Where due attention in the way of watering and feeding has been given, the latest supplies of Vegetable Marrows, French Beans, and June-sown Peas will now be invaluable. A sudden and complete change, however, in the weather may be looked for at any time, as even with the tropical day-heat we have experienced during the past week or so the thermometer has descended to a low figure on several nights, frost having actually been recorded. Such being the case, he who would preserve the two first-named vegetables must be up and doing. Although it takes but little frost to render these quite useless, it is surprising how much frost a thin covering of canvas will resist. Leave it off as late in the evening as possible, the dews tending much to recoup the foliage after the distressing effects of a sunny day. I have seen better crops of Ne Plus Ultra and Criterion this autumn than I have met with for years, but the best gatherings were being made from rows which have been well supplied with moisture at the roots and were well syringed just as the blooms were formed with the lime and sulphur mixture so often recommended in these columns. Walker's Perpetual Bearer is gradually finding more favour as a late Pea, and certainly its general quality, combined with its mildew-resisting powers, warrants it. In large establishments where the demand for French Beans is constant, a sowing, or, better still, an indoor-raised batch, transplanted into a cold frame at the end of July will now be in a bearing condition, and will be sufficiently protected by night by simply drawing on the lights, covering with double garden mats by the middle or third week in October. Overwatering with these late batches must be strenuously guarded against, as stem-rotting, owing to a fall in the night temperature, will probably occur. Avoid dribblets administered often, rather allowing the soil to become fairly dry, and then giving a thorough drenching with diluted farmyard liquid, choosing a fine sunny day. The value of this yield will be seen by its filling a blank which always occurs between the destruction of the latest open-air lots by frost and the supply from the first pot-grown plants indoors. The early part of November affording a none too varied assortment of choice vegetables, those who sowed a row or two of Scarlet Runners at the end of June, and, instead of supporting the growth by stakes in the ordinary manner, allowed the haulm to a height of 2 feet, and then pinched out the leads as advised, will not only have found that so grown better autumn gatherings are obtained, parching sun and drying winds being excluded With a minimum amount of labour, a rough framework may be built over one row at least.

Forwarding Seakale.—In a season notorious for a minimum amount of rainfall, the probability is that extra plantings of Seakale intended for introducing into heat at the beginning of November will, especially where occupying sloping south or west borders, be sufficiently advanced towards maturity as to need no aid to the same. On clay soils on the level, however, crown ripening may be hastened by thrusting the spade right down to the lowest thongs and severing them. Extra robust plants may also have a portion of the strongest leaves reduced with a knife.

Watering winter Spinach.—In all my experience I never knew winter Spinach suffer so much from drought on light soils; even on land which had been cleared of other crops for weeks before sowing the seed watering has had to be resorted to. This is the only way of saving this important crop from destruction and supporting the weakened growth until rain comes. I use roses on the pots and water late in the afternoon. In seasons like these the benefit of making an extra sowing is seen, as seldom do two batches growing in different situations suffer similarly. I have again sown a few rows of the summer variety, having proved its frost-resisting powers last winter, and it certainly eats more juicy and refreshing. Be diligent in the frequent use of soot, or soot and wood ashes, stirring it in with a Dutch hoe previous to watering, as in gardens liable to the wireworm it and a dry root-run will speedily ruin the crop. Nitrate of soda is good for Spinach beds in dry weather, promoting a certain amount of moisture in the soil, but care must be exercised in its use.

Preparing Pea pits.—It is bad policy to postpone the preparation of pits and deep, cold frames where sowings of Peas are to be made in November and December until that particular date, as one is never certain what the weather may then be, and if snowy or frosty, the soil is worked to a disadvantage, resulting ofttimes in wholesale rotting of the seed. I always grow Chelsea Gem or some other early dwarf variety in cold pits, and like to get the soil ready by the middle of October. The plan I adopt is to take out trenches annually and to replace with quite fresh rich soil, first of all treading in a good quantity of farmyard manure. The soil in which Pines and Tomatoes in pots have been grown is quite suitable, as it contains much rich food, the result of artificial feeding throughout the summer. If a little quite new loam can be added and the compost after being duly mixed thrown in in a semi dry state, no rotting will be apprehended, and the Peas after sowing can be exposed to a good rain or two to secure perfect germination. This system is far preferable to merely digging the soil and adding manure in the orthodox way.

Pricking out Cabbages.—After the required area has been planted with plants from the second sowing of the earlier varieties of spring Cabbage those that are left in the seed beds may well be pricked out closely on well-prepared firm ground in sheltered nooks or corners to stand the winter, as should the weather prove mild these are often of more value in spring than the ones wintered in frames, being stockier and more hardy, and going away better when transplanted. Cauliflowers may be treated in the same way, and dry leaves or branches thrown over the plants during sharp weather. Sometimes the latter will survive the winter if planted under walls similarly to Lettuce. The present is a trying time for freshly planted Cabbages on open quarters. Our soil was so dry that drills were drawn out the day before planting and filled with water, the plants being well watered again. Evening sprinklings with rosed watering-pots are also necessary to assist the plants to lift up their heads after such extreme heat. The same remarks apply to fresh planted batches of Endive. Established beds of the later salads, not having much longer to remain in the open ground, should be encouraged by liberal supplies of liquid manure; the moisture will also secure a good ball at lifting time.

Preparing Bean soil.—The sooner a large heap of good soil is prepared for use in forcing early pot and box Beans the better, as it can then be stored away in some convenient corner where it will not become too dry, and can be covered with boards or thick Bracken should much wet set in. A small percentage of fresh horse manure and some approved artificial manure should be added to the soil. Those who force in shallow wooden boxes—a good old plan—should on wet days see to the repairing of the same, adding new ones if required. Everything will then be in readiness for a start at the end of October. Those who contemplate Bean forcing for the first time and are not acquainted with the best varieties for the purpose, will find Sutton's Dwarf Forcing, Osborn's and Sion House useful kinds. J. Crawford.

STOVE AND GREENHOUSE.

BEGONIA DISEASE.

I regret to see, from Mr. J. C. Tallack's communication in The Garden for September 28, that his Begonias have been attacked with a disease of a terribly destructive character. The disease, or whatever it is, I find, extends to places wide apart. The early part of last August was the first time I became acquainted with it, when a friend of mine brought me some affected Begonia leaves from a garden nearly 100 miles away. I was quite unacquainted with the disease, but I could see at once that the leaves were affected with something very destructive. When placed under the microscope I could not find the slightest trace of insect life, nor did the injured parts of the leaves indicate that the disease was the result of insect agency. I can only describe the injury as a form of canker, which appears to attack the underside of the leaves first, and my friend tells me it eventually reaches the stem, and then the plants collapse. Whatever it is there is no doubt that it is a serious matter, as the gardener who brought me the affected leaves told me that in the neighbourhood of Gloucester it had proved to be infectious, as it had attacked the Vines in one house in which some affected Begonia plants were growing. So far as I know, it does not appear to have reached the plants that were growing in the open air, only those grown in warm houses. When the diseased leaves, to which I have referred, reached me, I naturally examined my own stock very carefully, and amongst some seedlings about four months old I found sufficient evidence to show that the plants were not free from the same enemy. I found five plants affected in the same way. These I instantly pulled up and threw away, and I have not seen any further signs of it since. Seeing that only plants growing under glass have suffered, it is very clear that cultural conditions have something to do with it. Some cultivators use too much manure for their Begonias and they use it too fresh. The best stimulant in this way that I can find is Moss litter after it has done duty in the stable and afterwards lain in a heap for three or four months. After being treated in this way and used in moderate quantities the roots of Begonias revel in it.—J. C. Clarke.

*** The disease referred to is, we think, caused by thrips. It is not uncommon, though not perhaps so frequently noticed as this year, which has been so dry and favourable to insect pests.—Ed.

Brugmansia flore-pleno.—In the conservatory at Rackheath Park, near Norwich, the resi-

dence of Sir Edward Stracy, is a very fine specimen in standard form of this fine old greenhouse plant. It has attained to a great height and covers a large area, this being the result of a rich larder and liberal feeding. When I saw it at the beginning of September it was covered with bloom, and presented a very novel appearance. Camellias also do wonderfully well in the same structure, this also being attributed to the extra root room they enjoy. In many conservatories the borders for Camellia roots are far too limited in size; hence, being free-rooting plants, they soon fill them to overcrowding, rendering it next to impossible to support growth even by liberal feeding. It is well when the borders can be enlarged as the trees increase in size, as nothing resents a sour mass of soil more than Camellias. —J. C.

Eucalyptus citriodora. — Scented-leaved plants are grateful to nearly everyone, and among them is the old Lemon-scented Verbena (Aloysia citriodora), to whose perfume that of the Eucalyptus in question bears a great resemblance. It is a less vigorous grower than many other species of Eucalyptus, and if allowed to grow away without stopping it forms a thin-growing subject bare of leaves at the base. To obviate this as far as possible the young seedlings should be stopped freely during their earlier stages in order to assure a bushy habit of growth. In the case of plants that have been allowed to run up thin they may be cut back hard in the spring, and as they generally break out well, one has not long to wait for an ample crop of leaves. These leaves are oblong-lanceolate in shape and covered with glandular hairs, from which the perfume is emitted. This Eucalyptus, in common with most members of the genus, produces two totally different kinds of leaves, and it is only the young and juvenile foliage that is scented, the mature leaves being smooth and nearly scentless. However, as a rule this species will attain the dimensions of a good sized plant before any adult leaves make their appearance.—T.

Sarracenia flowers, scent of.—The curious, but beautiful flowers of Sarracenia flava are well shown on the coloured plate in The Garden, September 14, and in the accompanying article attention is directed to the ornamental features possessed by the blossoms of some other species. One item, however, I did not see noticed, and that is the great difference that exists among the various forms with regard to the odour of the flowers. For instance, the deep red blossoms of S. rubra emit a delicious Violet-like perfume, which during sunshine is especially pronounced. S. flava has when in flower quite a disagreeable smell, while S. Drummondi and S. purpurea are almost scentless. From a flowering point of view alone the Sarracenias certainly merit attention, as when in full bloom they are very attractive and remain fresh a considerable time. Taken in conjunction, too, with their singular pitchers, they form quite a unique feature in the greenhouse. Sarracenias seem to be a little more popular now than was the case two or three years ago, though some fifteen years since or thereabouts there was a fair demand for them, and some of the principal nurserymen made quite a feature of the best forms.—H. P.

Lilium sulphureum.—This Indian Lily, which was at first known as L. Wallichianum superbum, is just now beautifully in flower, and forms a very attractive feature in the greenhouse. Its long tube-shaped blossoms are almost white, tinged more or less on the outside with purple, while the interior of the flower is heavily shaded with deep primrose. This Lily is unlike most of the other Indian species, as it succeeds under cultivation in this country, and does not deteriorate in the same way as L. nepalense and L. neilgherrense. It is frequently very late in starting into growth, but when once the stem makes its appearance it grows away rapidly. If grown in pots for the embellishment of the greenhouse it will be found a good plan to plunge the plants out of doors during the summer till the flower-buds are well developed, otherwise if kept altogether under glass they run up tall and weak. Apart from its magnificent blossoms, this Lily is also remarkable from the vast numbers of leaves produced by a single plant, and more particularly by bulbils being borne in the axils of the leaves on the upper part of the stem, as in the case of L. bulbiferum and the Tiger Lilies. Up to the introduction of this species the peculiarity in question was unknown in the Eulirion or tube-flowered group. The bulbs of L. sulphureum are large and mahogany coloured. Small bulbs of this species are very difficult to distinguish from those of L. nepalense. —H. P.

The Tree Carnation. — Mr. A. Hemsley's article is full of interest, and opens up the question as to the origin of the Tree Carnation. The works published on the culture of this flower give little or no information on this point. I once put the question to Mr. E. S. Dodwell, and his opinion coincided with my own in attributing the Tree Carnation to the selection of one of those stems the ordinary summer blooming types are apt to put forth, namely, a shoot which, instead of throwing up a flowering stem, lengthens considerably and is covered all the way up with small side shoots. One of these grown on flowered during the winter, and cuttings taken from such a plant laid the foundation of the tree section, and it is only natural a propagated plant should transmit this peculiarity. The treatment adopted, *i.e.*, the time when the cuttings are struck and the placing of the plants under glass, will determine the season of blooming. Last spring when I was visiting the Royal Nursery, Slough, I saw in one of the houses there was a very fine lot of two-year-old plants of Germania of most vigorous growth and throwing up a number of flower stems; the forwardest buds were already expanding. Mr. Harry Turner said that such plants produced much finer blooms than yearling ones, and I could see that it was so. One very satisfactory feature about the present race of Tree Carnations is the reduction in the height of the plants which prevailed thirty years ago. Improved methods of cultivation have had something to do with this.—R. D.

CARNATIONS FOR WINTER BLOOMING.

Mr. Weguelin's remarks on p. 218 respecting these are somewhat misleading, inasmuch as they infer that the ordinary border varieties can be made to bloom throughout the winter. Mr. W. says, "Carnations, if properly understood, can be had in flower all the year round," and then adds that he exhibited a stand of plants at the Plymouth Chrysanthemum show in November. These plants I saw, but in no sense could they be considered "winter blooming." The varieties were simply border ones, but their blooming, or running for bloom, was more the result of chance than design or culture. Out of a large collection of border sorts it is in most seasons possible to pick out a dozen or so plants showing buds early in the autumn, and these, if potted up, will bloom for a few weeks, but can hardly be termed winter-blooming varieties, and something different is required by our large growers who grow enormous quantities of bloom throughout the winter. Very few can have any idea of the extent Carnations are grown to supply Covent Garden with blooms during winter. I know of one grower who has a stock of eleven thousand plants in one variety only.

The Americans undoubtedly grow Carnations extensively. I hear one firm has a stock of seven thousand large plants of a novelty, and the whole will be propagated from throughout the winter, and the number of plants which will be produced will seem almost incredible. The American growers are not successful with our most popular varieties, but their mode of culture has a great deal to do with their non-success. They strike cuttings in spring, and the plants are put out in the open fields, where they make good growth. In September they are lifted and benched, that is planted out in beds or shelves in the greenhouse. The American standard of excellence is different from ours. Here we prefer varieties with round and smooth-edged petals; in America preference is given to blooms with a rough or serrated edge. The famous Uriah Pike is at a discount in America for the following reasons: the colour is too dark, it is not free-flowering enough, and has smooth-edged petals.

Mr. Weguelin gives a list of varieties he has just received from America for trial. Many of them have been grown in this country for some years, and are vastly inferior to our English varieties. I will describe a few as I have found them. Lizzie McGowan, white, very free-flowering, but thin and of poor form; plant, a weak grower. Daybreak, delicate pink, irregular in form, one of the best. Bouton d'Or, pale yellow, striped purple, good large bloom, but a very slow grower. Buttercup can hardly be considered a perpetual, being more of the border type, not free-flowering either in this country or America. Wm. Scott, pink, also very much fringed, utterly useless to the "up-to-date" grower. Uncle John, white, is larger and fuller than Lizzie McGowan, but not a clear white. W. J. Godfrey.

Exmouth.

Rooting Poinsettias.—It is often difficult to procure Poinsettias sufficiently dwarf for use in ornamental baskets and vases for drawing-room decoration unless struck very late, and then a satisfactory growth is often lacking. A capital plan of securing dwarf plants is adopted at Blickling. It consists in making an incision half-way through the stem, just below a joint, and mossing the wound over. If done in August the plants callus over by the end of September, and if then detached and placed in small pots and plunged in a brisk bottom-heat they very quickly root and come in most useful where dwarf plants are in request. I may add that when the tops are taken off and potted the Moss is allowed to remain on. —J. C.

Propagating variegated Yuccas. — The variegated Yuccas, such as Y. aloifolia variegata, Y. quadricolor, and Y. filamentosa variegata, are, in the shape of small plants, very ornamental in the greenhouse, and in some places they are always grown for this purpose. Neat plants in pots from 6 inches to 9 inches in diameter are, as a rule, the most useful; hence it is necessary to propagate a few occasionally in order to keep up the stock, as some may grow too large for the purpose. A limited number can be obtained without injuring the stock plants in any way if the following directions are carried out. In the case of plants in small pots it will be often noticed, at this time of the year especially, that there is a tendency for the ball of soil to be lifted out of the pot. An examination will reveal the fact that this is caused by very stout sucker-like growths, which contain at the apex an embryo plant, and if allowed to remain undisturbed it would finally reach the surface and push forth leaves. To obtain these suckers the ball of earth should be turned out of the pot, when the sucker-like growths will be found at the outside of the ball, and in nearly every case with a sharp knife they can be readily separated at a length of 3 inches or 4 inches. This is sufficiently long to leave in most instances some fibrous roots attached to the suckers, which should be potted in small pots, using for the purpose a soil composed principally of sandy loam. The growing point of the sucker should be placed in the centre of the pot and at such a depth that the upper portion is just covered with the soil. Then if the pots are plunged in a gentle bottom heat they will soon push forth leaves and form neat little plants. Of course, where large plants are given up to propagating purposes the crown may be taken off and struck, and the young shoots produced from various parts of the stem after the removal of the top may, when large enough, be similarly treated, but by the first-mentioned method no disfigurement of the stock plants is necessary. Dracænas of various kinds, more par-

ticularly the well-known Dracæna or Cordyline australis, may also be propagated by means of the stout sucker-like growths, or toes, as they are popularly called.—T.

Datura cornucopæa fl.-pl.—This fine new species seems to require more warmth than the older herbaceous kinds. Grown here in pots under glass with D. chlorantha, D. Huberiana and D. meteloides, and given the same treatment, it opened its flowers very tardily, while the others bloomed freely enough; in fact, I believe but for the bright, sunny season they would not have opened at all. I hope it may prove perennial wintered in an intermediate house like D. chlorantha and D. meteloides. The advantage of wintering them is that they flower more freely and become finer specimens. I regret I did not plant out one or two, for with good soil and the abundance of sunshine which we have enjoyed it would have made more vigorous growth and very likely behaved differently. All the Daturas, including the Brugmansias, are great favourites of mine, and I can never have too many of them. Many years ago (perhaps forty) I grew several other annual kinds, all more or less attractive. Amongst them were D. carthaginensis, D. ferox, D. quercifolia, D. Tatula, D. humata, D. lævis. Seed of none of these is now obtainable. D. gigantea, seed of which I received from Africa, is a very robust annual species, growing in rich soil to the height of 5 feet or 6 feet, with black stems and a much-branched, spreading head, but the flowers are small—not larger than those of Datura stramonium, of two shades of blue. Like D. stramonium, it will generally sow itself, and, like it too, its seeds retain their vitality a long time in the ground. A bed deeply dug here this year yielded quite a colony of plants, yet none had been growing there for three or four years. It is a distinct plant and worth its room. I have often tried to cross the Daturas, but have never once succeeded. I hope the known, but unintroduced, species will soon be amongst us, or it will be too late for us aged gardeners and their ardent admirers to make their acquaintance. All the herbaceous Daturas should be sown as early as possible to obtain the best results, and nothing suits them better than a brisk manure hot-bed in which to push them on.—J. M., *Charmouth, Dorset.*

ORCHIDS.

MILTONIAS.

Several of the species belonging to this genus are among the finest of our autumn-flowering Orchids, and cannot be well dispensed with in collections whatever their size. They are natives of various parts of the American continent and the majority of the species are of easy culture. All are pseudo-bulbous epiphytes, some growing in clusters, others at varying distances apart upon creeping rhizomes, and the majority are free-blooming, handsome-flowered Orchids. The genus was named by Lindley in honour of Viscount Milton. The majority are easily propagated by division of the pseudo-bulbs. Several of the best kinds are remarkable for the pale green colour of the pseudo-bulbs and leaves, especially M. spectabilis. This is sometimes looked upon by amateurs as indication of ill-health and supposed remedial measures taken, but as it is natural to them no special treatment is needed or will have any effect upon this. Miltonias like a very free and open root-run, and as a rule not too much of it. An abundant supply of water is needed, especially while growing freely, and on this account good drainage kept free is one of the first considerations. Some do best in pots, others in shallow pans or on rafts, but these will be best described below. They all without exception like a good clear light, but none of them will stand direct sunshine, so that a little shading is necessary in hot weather. But the growth must be ripened, or else it is useless to expect flowers of good quality or in sufficient numbers to make them worth growing.

M. anceps is a very old species, having been brought from Brazil in 1851. It has always been an uncommon plant, and was for a time supposed to have been lost to cultivation. In habit it resembles a small-growing form of M. spectabilis, the flowers also being similar in shape to those of this fine Orchid. The sepals and petals are of varying shades of green, with markings of reddish purple, while the lip is white with a few red spots. The best way to grow this kind is on a raft very lightly dressed with peat fibre and Sphagnum, giving it a light and airy position in the Cattleya house.

M. candida is an easily-grown, free-flowering kind, introduced from Brazil in 1830. This has flowers upwards of 3 inches across, these being produced in racemes of seven or eight on strong plants. It is not uncommon for this plant to bloom twice during the year, but its usual flowering season is in autumn. Pot culture suits it well and it thrives in a mixture of peat fibre and Sphagnum, to which may be added a good sprinkling of charcoal or crocks, the whole overlying good drainage. During its growing season an abundant supply of water is required, and even when resting it should not be dried. This dislikes much sunlight, and may be grown in the shadiest part of the Cattleya house. It is a variable kind, the type having yellowish segments barred and lined with reddish brown, and the lip is pure white. There is a yellow-lipped kind, glaucescens, and also a large-flowered variety, grandiflora. Another fine autumn blooming species is

M. Clowesi, similar in habit and cultural requirements to M. candida, to which its flowers also bear some resemblance. These are produced on erect scapes, and have sepals and petals chestnut-brown tinged in places with yellow, the colours running into each other. The cordate lip is white with a deep purple base, and the flowers last well for a month or five weeks. A larger form of this, M. C. major, is superior to the type, and there are other named varieties. A Brazilian kind introduced in 1843, as was also

M. cuneata, a free-growing and abundant flowering species of larger growth than the majority. This thrives best in a brisk, moist heat with plenty of sunlight, and produces its flowers in spring. The racemes contain about five flowers, each 3 inches or more across. The wavy, dark brown petals are greenish yellow on the points, the lip white, spreading, and spotted with rose colour. Pot culture in peat and Sphagnum suits it well.

M. Phalænopsis, M. Roezli and its varieties, and M. vexillaria are all natives of New Grenada, found at great elevations. The pseudo-bulbs are clustered, leafy, and bear spikes freely from the axils of the latter. Their culture differs somewhat from that of the other Miltonias, and they are frequently known as Odontoglossums.

M. Regnelli comes from Brazil and is a pretty species, thriving well under the same conditions as M. cuneata. The flowers, borne on erect scapes, are each about 2 inches across, pure white, with a rosy purple lip also margined with white. It is an autumn-blooming kind, lasting about a month in good condition, and was introduced in 1864.

M. spectabilis is a well-known and handsome species, and one of the most variable in the genus. The pseudo-bulbs, about an inch apart, occur upon a creeping rhizome, and, with the leaves, are light yellowish green. This species does well on rafts with peat and Sphagnum, and must only be shaded sufficiently to prevent scorching. The plants must be firmly fixed in the first place, after which the roots cling tenaciously to the sides of the raft. Plenty of water is needed all the year round, less of course during winter than in summer, but the growth must never be allowed to shrivel. The flower scapes appear in autumn, and each bears a single large flower. The sepals and petals are creamy white, the lip spreading, rosy purple with deeper lines. The beautiful variety Moreliana has flowers wholly of a deep purple, the lip shading to rose, and is a truly handsome kind when well grown and flowered. There are several sub-varieties of this and also many other varieties of the type, including M. s. radicans, a pretty form with a creamy white lip and radiating lines of purple; M. s. rosea, aspersa, lineata, and others, all beautiful kinds, differing more or less from the type, which was introduced from Brazil in 1837.

M. Warscewiczi is a Peruvian kind of a very distinct habit and inflorescence. The scapes are branching and many-flowered, the individual blossoms being 2 inches across, the sepals and petals reddish brown tipped and margined with yellow, lip brownish purple with a rosy margin. The plants, which flower at various times in the year, may be grown in a shady corner of the Cattleya house. R. H.

DENDROBIUM BIGIBBUM.

The richly-coloured flowers of this Dendrobe are just opening, and it forms a good companion plant to its near ally, D. Phalænopsis. It can hardly be styled a difficult plant to grow, for when systematically treated it usually does well. Still the fact remains that many fail with it, and this from want of thought more than anything. In order to grow D. bigibbum well a strong moist heat is needed, and as the young shoots frequently start late in autumn, this has to be kept up all through the winter. It cannot then be accommodated with the ordinary deciduous species of the Wardianum and similar types, but must be separated from them as soon as they are on the move. A house devoted to winter Cucumbers makes a good home for D. bigibbum. The resting season even of East Indian plants necessitates a considerable drop in the temperature of this house, and it therefore falls below the requirements of this heat and moisture-loving kind. It dislikes a large body of compost about its roots, but what little is provided must be kept sweet and open. If the peat by constant watering becomes sour and close, it will be found advisable to repot, or at least to surface-dress the plants yearly, but once in two years usually suffices if the material used is good. Small suspended pans may be used, as by this means the plants are brought close to the glass and get the full benefit of light and air. Syringing overhead may be practised with safety as long as the weather is bright and hot, but as soon as dull weather sets in this must be discontinued, or the loss of many of the growths will be the inevitable result. The pseudo-bulbs when fully grown must be well ripened, and if the outside conditions permit, the plants should be placed in a sunny frame where the lights can be drawn on at night. Towards the end of summer the flower-spikes will be showing, and the plants will require to be placed again in heat. These usually show most freely on the bulbs of the second year, but it is not uncommon for the newly-formed ones to produce a few flowers, especially after a hot, sunny season. The old bulbs go on flowering for several years; in fact, until they become too weak to do so. The spikes are erect, or nearly so, and bear many flowers, these being of a rich magenta-purple with a white crest to the lip in the type. Several varieties are described differing from this both in size and colour, and they all flower during late autumn. D. bigibbum is found in Northern Australia, and is an old plant in cultivation, having been introduced in 1824.

Cattleya bicolor.—The distinct appearance and colour of this Cattleya should ensure it a place among autumn-flowering species. It is not very showy, but very interesting. The pseudo-bulbs grow about 30 inches high, and each bears on the apex a couple of leaves, from between which the flower-scapes are produced. On strong plants

these bear as many as a dozen or fourteen of the singular flowers, each about 4 inches across. The petals and sepals are greenish when the flowers open first, afterwards turning to an olive-brown. The lip, which is peculiar in having no side lobes enfolding the column, as is usual with this genus, is a pretty tint of purplish crimson, becoming paler towards the margin, and in some varieties having a broad marginal band of white. The usual Cattleya house temperature suits C. bicolor well, but it requires more shade than most other kinds. The compost may consist of equal parts of peat and Sphagnum, with plenty of rough nodules of charcoal and potsherds added, the roots being large and delighting to ramble about these rough, hard surfaces. It requires careful watering at all times, but especially during autumn and winter, for the roots, though large, are easily damaged by too liberal a supply. It is found growing naturally on tall trees in Brazil, and was introduced in 1837.

Angræcum bilobum.—This pretty and compact growing Orchid does well in small baskets with a very little live Sphagnum about its roots, and just now its elegant drooping racemes of small white flowers are very attractive. Coming as it does from New Guinea, it likes ample heat and an atmosphere dripping with moisture. The basket should be hung up near the glass, but in a shady position, as the leaves are easily injured by bright sunshine. The state of growth must be the guide to watering at the roots, which must not be allowed to shrivel in winter.

Cypripedium Charlesworthi.—I have just received a beautiful variety of this superb Cypripedium, the dorsal sepal being very broad and of a lovely warm rosy pink shade, made all the more attractive by the distinct white staminode plate. This is bound to become extremely popular, for not only is it one of the most distinct and pretty in the genus, but it seems to grow as freely as an ordinary C. insigne. In habit it closely resembles C. Spicerianum, the leaves being blotched on the under surface with dark brown. It thrives in the warmest house in a shady position and likes a good proportion of fibrous yellow loam in the compost, care being taken not to make it too heavy, and by giving good drainage to prevent its becoming waterlogged.

Flower Garden.

HARDY CRINUMS.

If a test of hardiness was ever needed it was undoubtedly forthcoming during the winter of 1894-95, and any plant that withstood the severity of that frost may justly be regarded as perfectly hardy. After such an exceptionally severe spell I was interested while on a recent visit to the Botanic Gardens, Birmingham, to note two Crinums, viz., C. Powelli and C. longifolium, in the fullest health and vigour. These had remained outside for several years past, including last winter, without any protection beyond that afforded by a south-west wall which formed the end of the cool conservatory. The main secret of success with such things is deep planting; this is absolutely essential with these and similar bulbous plants. To be more explicit, it should be stated that by deep planting it is always intended that at planting time the top of the bulb should be fully 8 inches under the surface. To secure the necessary depth and at the same time provide suitable material for the roots of these plants, it will be needful in many gardens where the soil is clay, or of a very shallow nature, to remove the original soil to a depth of 2½ feet. The best way, or at least the simplest and most inexpensive, will be to take out a narrow trench one foot wide to the above depth. When the trench is deep enough, some rough clinkers, broken bricks or pots to the depth of 6 inches should be first placed in the bottom for drainage, afterwards filling in with good loamy soil, peat, and leaf-mould. Sharp sand may be employed liberally about the bulbs, and well-decayed manure to enrich the whole may be worked in at a fair depth below the base of the bulbs, remembering always in this connection that the roots of such things go straight down and that the food should be where the roots invariably descend. In a narrow border prepared on these lines, such things as the Crinum above named, together with the Belladonna Lilies, which in reality are a host in themselves, may be grown infinitely better than by any system of pot culture under glass. Take the latter for example, and these for the past week or two have been making a grand show in a narrow border at the side of the Orchid house at Kew. Some of the bulbs must be of great size, as I noticed recently as many as four and five spikes issuing apparently from one root cluster. Indeed, the proximity of the spikes was such that the flower spikes appeared to be issuing from what was originally one bulb, but now of such a size that the offsets were flowering, while the succession in which they came confirmed the idea that all came from one root-stock. This is a splendid result, and simply an instance of what such things will do when fully established. And in just a similar way may these plants be grown in private gardens. One very charming kind at Kew is called A. B. blanda. In the spring-time the border set apart for such things should be aglow with white and blue Wood Anemones, Chionodoxas, Iris reticulata, and later with any such Daffodils as Emperor, Horsfieldi, Empress, Grandee, or Sir Watkin, to give place in summer time to the Crinums and Amaryllis Belladonna. For still later flowering, if space permitted, may be included Lilium speciosum Krætzeri, whose leafy stems would act as a foil to the Belladonna Lilies. E. J.

Macrotomia echioides.—Judging by the present labelling at Kew, this appears to be the up-to-date name of the plant recognised by the generic name of Arnebia. Of the wisdom or otherwise of the corrected name I have nothing to say. But seeing that the generic name of Arnebia has been now so long in use that it is known everywhere, it comes as a surprise that the old name finds no place on the rock garden specimen at Kew. The generic name above cited, so far as the Arnebia is concerned, appears also a new creation, as I find no mention of Macrotomia with the other synonyms for Arnebia in the "Dictionary of Gardening." While admitting the necessity of providing new names in certain cases, I am of opinion that the gardening public would be much assisted if the Kew authorities submitted an official list of such alterations to the leading horticultural journals from time to time. Such a list would be most useful to all interested in correct nomenclature, while to those at a distance from the metropolis it would come as a boon.—H. M.

Liatris (Blazing Star).—This distinct and interesting North American plant is by no means common in gardens, as at the most one sees but one species, and that generally is L. spicata. Just at this season of the year the species of Liatris afford quite a distinct tone of colour in the garden, and for this reason alone are worthy of remark. Quite recently I noted three members of this genus flowering in the rock garden at Kew. The most showy is L. scariosa, a plant not always obtainable true to name. It is about 3 feet high, and makes a good display of its mauve-purple blossoms at one season. In the case of L. spicata and L. pycnostachya the flowers, curiously enough, commence expanding, from the top of the spike, and continue opening downwards. This characteristic is seen in but few plants. L. pycnostachya attains to nearly 6 feet high, and produces its pale reddish purple flowers in a dense cylindrical spike. The leaves are usually narrow or lanceolate and rigid, the growth more or less erect, so much so that a dozen plants would have ample room in a space of 3 feet. These plants are easily cultivated in any ordinary garden soil, the last-named species being valuable by reason of its adaptability to dry soils. All the kinds are readily increased by seed, which may be sown as soon as ripe or in early spring, or the rootstock may be divided with ease and certainty either when flowering is completed or with returning growth in spring.—H. H.

Heuchera sanguinea. — In the Rev. C. Wolley-Dod's remarks on this plant I was surprised to read that cold situations and cold winds must be avoided. I have grown this plant by the thousand for some years in the open fields. I have one lot growing in loam and another in very light soil, and both bloom and grow very freely. The cause of not flowering is, I think, too rich soil.—B. Ladhams, *Southampton.*

Iberis gibraltarica.—This is perhaps the largest as well as the showiest member of the Candytuft family. It is, however, doubtful whether we see it at its best when regarded as a hardy border plant. Indeed, it rarely survives our more severe winters, and if it succeeds in passing through a moderately severe one, it is seldom satisfactory afterwards. The plant will frequently, when grown in warm well-drained soils and positions, survive an ordinary winter. Plants raised from seed sown in March or April, preferably in the open ground, as they do not transplant readily, will be strong, and should they survive the winter they will make a fine display the ensuing spring and early summer. On light sandy soils the plant is usually a success, and the large heads of delicate lilac flowers are very showy. It may be raised freely from seed. On this account it is not worth the trouble of increasing by cuttings, unless it be an exceptionally fine kind. In my experience of it, the cuttings are liable to canker instead of rooting in the usual way. By treating it as a biennial, sowing the seeds in the open or thinly in pots, a supply may easily be kept up. As a pot plant for the conservatory it is very useful, and the flowers lose much of the lilac hue that they assume out of doors. For this purpose when well grown the flowers are nearly pure white and very effective. Under glass a cool, dry, and airy position should be always given it. Heat is the reverse of beneficial, and if applied the plant quickly becomes weak and useless.—E. J.

Japan Anemone Lady Ardilaun.—I lately saw a group of this Anemone in Mr. Ladhams' hardy plant nursery. It was growing in the sandy and stony soil with great freedom. I did not notice any trace of the disease "J. C. B." speaks of on p. 198. Individually the plants are much finer than the type, being more compact and flowering more freely. The extra stiffness of the peduncles is a point in its favour. The leaves are sturdy and have a glossy look about them which is pleasing. I think this Anemone will oust the older form when it becomes better known. Growing as I saw it in such hungry-looking soil and especially during the recent hot and dry weather that it has had to contend with, is really a thorough test of its non-liability to disease. The variety Whirlwind, growing alongside as I saw it, I look upon purely as a monstrosity, a good flower spoilt by the intermixing of the petals and green calyx-like substance that the flower is composed of.—E. M.

The Japan Eulalias.—The Fan Grasses or Eulalias of Japan are now, I believe, placed in the genus Miscanthus, but it will probably be some time before the later name becomes current, and so we may stick to Eulalia, for the present at least. I have long grown these beautiful Grasses, both green, striped, lined and barred, but never saw their fan-like plumes so profusely produced or so fully developed as they are this season. It is, I suspect, the late hot sunshine that has thus stimulated them into unwonted beauty. Even though these plants never flowered, they would

always be valued for their freshness and grace in the garden, but the inflorescence is an added gain, as each grassy stem, 5 feet to 7 feet in height, is topped by a feathery fan of dark reddish purple, from which the golden anthers dangle and shimmer in the hot sunshine in a very pretty way. Later on the spikes become a mass of silvery fluff, and remain bright and beautiful all the winter unless they are cut for decoration.—F. W. Burbidge.

FLOWER GARDEN NOTES.

Autumn planting.—Many, indeed most, of the summer bedding plants are now practically over, and if it has been decided to make additional plantings of herbaceous subjects in lieu of more tender things, the beds can be cleared of the latter and will be ready for the replanting when



View in the grounds at Castlewellan. From a photograph by Lord Annesley.

circumstances permit. It is now advisable, by the way, to leave it until after the middle of November, as after that date a severe frost may put an end to all planting operations for the present year. Reference has often been made to the advisability of getting out in good time such things as Tufted Pansies, Pinks, Carnations, &c., and good plants from cuttings or layers should now be ready. Where anything is to be associated with the Tufted Pansies through another summer, care should be taken to think of this when planting that the contrast may be a pleasing one. I may just note in connection with Carnation planting that if the weather continues as hot and dry as at the time of writing (September 23) and the soil is naturally light, a good mulch should follow immediately on the heels of planting, especially if the layers are not too well rooted. In addition to the above-named hardy plants other things of somewhat larger size have come prominently to the fore in recent years, and have been planted largely not only in odd nooks and corners, but in the best places in the flower garden that were formerly given over entirely to tender plants now that the cultural skill brought to bear upon them has proved that they will furnish a very prolonged display of flower. Take Phloxes as an example. Not only can the season be prolonged by grouping together the suffruticosa and decussata sections, but in the latter family alone the flowering is lengthened in three ways—by allowing some to develop to the utmost the first spike, by taking this out when the pips first show a sign of decay, and by pinching this first spike out as soon as it shows signs of coming up. Beds planted entirely with Phloxes and treated in this way may not give a dense mass of colour at any one particular time, but the display starting in August will be well sustained until the advent of frost, and if, as noted above, the two sections are grouped together, a flowering season of nearly five months is easily obtained. The wonderful improvement in the substance of pip enables the new varieties to be used freely in a cut state, and the reduction in height is another point in their favour when used for prominent beds on lawns. They are long-suffering plants, that is, they will grow and flower in soils and situations where other things would fail, but are at their best in a border where the soil is fairly good and has been worked to a depth of 18 inches, and they are greatly benefited by a mulching of half-rotten manure, which can be put on as soon as they are planted. Let me confidently recommend one or two beds of Phloxes to those who contemplate increasing their herbaceous plants. New varieties of the current season will be found rather expensive, but good old sorts can be secured at reasonable prices if there is not a stock already in hand. A good bed for another year would be bold groups of Newberry Gem Pentstemon on a groundwork of Veronica incana. Having decided on the bed to be planted in this way and the size of the clumps of Pentstemons, the Veronica incana may be planted as soon as convenient, and will be a nice silvery carpet throughout the season of 1896, whilst cuttings of the Pentstemon may be at once inserted if not already done. This is one of the older varieties, but still one of the best for bold grouping. The hardiness of Lobelia cardinalis on this soil having been established, I shall plant a bed this autumn with alternate clumps of this and Gypsophila paniculata, giving a good mulching of half-decayed leaves about 2 inches in thickness. The Gypsophila is over somewhat early in the season, but is beautiful in its decay, the tiny seeds holding well on the long feathery spikes. A rather interesting combination for a dry spot can be effected by grouping some of the Megaseas with Sedum spectabile. These plants are somewhat alike in their requirements, and the difference in the flowering season gives a longer display. In some of the families of herbaceous plants that are represented by very many varieties the pronounced difference in the height enables one to group them together in large beds without introducing anything else. This is noticeable in the Starworts, which range from 1 foot to (given a fairly strong soil) nearly 7 feet. It is not, however, advisable to "make extremes meet" in planting, but rather to work down by degrees, and the great variety in heights enables one to do this. As an instance of a good combination, I may mention Aster Novæ-Angliæ roseus, vimineus and dumosus. Take the Campanulas, again; a very interesting bed can be planted with these alone in variety, and the difference in height is

almost as marked as in the Starworts, ranging from those sorts with tall spikes nearly 5 feet in height to the trailers that will hardly reach 12 inches. It is not advisable to fill beds entirely with those things whose flowering season, although brilliant, is comparatively short lived. In the case, therefore, for instance, of the Hemerocallis and Funkias in variety, other things may be associated with them which will at the same time harmonise well in the matter of foliage and give a display of flower at other times than is afforded by the Day and Plantain Lilies.

Flowering shrubs.—If any planting of these is to be carried out this autumn the same discrimination should be shown as that practised with herbaceous plants. It may be noted in the first place that, even if the planting is only on a small scale, sufficient of each variety should be grouped together to afford a nice display; this is always much more effective than dotting a great number of subjects together in single plants. Very bright at the present time are bold groups of Hydrangea paniculata, especially if they are backed by a bit of bright foliage such as is furnished, for instance, by Prunus Pissardi. In the very front rank of ornamental shrubs must be placed the old, but very beautiful Rhus Cotinus, and room should be found for at least one or two small groups. The white, flesh-coloured and pink forms of Pyrus japonica are very interesting just at present from the fact that they are fruiting freely, and later, when the fruit has put on its golden tinge, the plants are quite a striking feature. Spiræa Thunbergi and S. prunifolia fl.-pl. can always be recommended as shrubs with delicate foliage and throwing big sprays of beautiful flowers. Other useful things for spring cutting are the white form of Weigela and the large-flowered Philadelphus. Apropos of the desirability of strengthening in gardens the herbaceous plants and choice flowering shrubs in lieu of tender subjects whose beauty is so soon at an end, I have noticed this year an instance on a small scale in the case of two cottage gardens side by side, the one planted entirely with Geraniums, Calceolarias and Lobelias, which must have been obtained at some considerable cost, the other relying on old-fashioned perennials, which were, by the way, very well arranged. For a brief season the first named was very gay, but it was short-lived, and for a considerable time it has been dull and comparatively flowerless, whilst the neighbouring garden is all ablaze with, among other things, perennial Sunflowers, Japanese Anemones, both white and rose, late-flowering Phloxes and Antirrhinums, whilst in the front alternate clumps of the old double Chamomile and a dwarf blue Campanula form an appropriate finish to a very interesting picture. E. Burrell.

Claremont.

Societies and Exhibitions.

FRUIT SHOW, CRYSTAL PALACE.

September 26, 27 and 28.

The interest in this, the second of the large autumn exhibitions at the Crystal Palace held under the auspices of the Royal Horticultural Society, has been fully sustained. Never before perhaps have so many fruit growers (both the trade and private growers) been gathered together as at this show. The exhibition itself was a grand display of British-grown fruit throughout, affording, we may fairly surmise without being egotistical, a very good example of this important industry to our Continental neighbours and colonial subjects, better than which it would be difficult to find outside of the three kingdoms. There was throughout nearly all the exhibits of hardy, *i.e.*, outdoor, fruits ample evidence of high-class finish, the weather of late greatly favouring this development. The Kent exhibits, although excellent, were not this year so far in advance of those of other districts as at the previous show. This was in a measure encouraging, for any undue and repeated monopoly could not but have a tendency to dishearten those outside of the favoured county. It is quite evident that a great amount of interest is shown in this gathering of fruit growers, and it is greatly to be hoped that it will not abate. Regarded in a collective sense, this exhibition was better than that of last year. This advance was more apparent in the Apples than in any other produce; the improvement therein was evident both in the size and quality of the best exhibits, whilst the competition was far more keen than on the last occasion, very many examples of high-class culture having to be passed over without any award whatever. Even if looked at from a commercial point of view only, an inspection of the hardy fruits to be seen in such abundance and of such high-class quality, one most instructive lesson was fully apparent, viz., the utter folly of still adhering to the old worn-out orchards which have long ceased to be really remunerative to the cultivators. Cultivation is, perhaps, scarcely considered by some, it being more of a haphazard policy. It is quite time, however, that all old ideas were abolished where no sufficient proof exists of profitable returns. The clinging to quite old sorts, now entirely surpassed by greatly improved varieties, is an utter mistake. As a late Apple, Prince Albert is an instance of this amongst cooking kinds, as Cox's Orange Pippin is amongst dessert varieties. On the other hand, if we leave profit from a business point of view out of the question, it is infinitely more enjoyable to have our trees laden with fine fruits rather than with scrubby ones. From the side of beauty alone during the progress of development it is all in favour of the younger and more vigorous trees, whether they be Apples or Pears. Then, again, when the fruit is all stored the inspection of the fruit room is a great source of enjoyment when the quality is what it should be.

Alluding more particularly to the recent show, it has been stated the Apples showed to the best advantage in point of numbers, whilst the Kent exhibitors still carried off the greater number of the premier awards. Some of the exhibits, however, from other parts of the country beat the best of the Kent productions in the single dish classes for Apples. In the Pear classes, the best collection came out of Sussex in the large class, whilst from other counties came those who also vanquished the Kent men, the same results obtaining in the single dish classes. For Plums the Kentish growers were beaten most decisively, the prizes in these classes being well distributed.

The arrangement of the exhibits was excellent, the remarks made on this point after last year's exhibition being again fully sustained. The one regrettable thought running through the minds of very many exhibitors was that this show is probably the last over which Mr. A. F. Barron will preside.

Collections of Fruit.

For a collection of twelve dishes of ripe fruit, not less than six kinds nor more than two varieties of a kind, there were three competitors, Mr. McIndoe (gardener to Sir Joseph Pease, Guisborough) winning the premier prize with an admirable collection considering the lateness of the season. This collection comprised a well-ripened bunch of Bananas of excellent colour, two fairly good dishes of Grapes (Gros Maroc and Foster's Seedling), with fine dishes of Bryanston Gage and yellow Magnum Bonum Plums, extra good dishes of Exquisite and Golden Eagle Peaches, Doyenné Boussoch and Pitmaston Duchess Pears, with Gascoigne's Scarlet Seedling Apple, Figs, and a Melon. Mr. Gleeson (gardener to Mr. C. E. Keyser) was a remarkably close second, having a grand Ripley Queen Pine weighing 6 lbs. 10 oz., highly coloured Muscat Grapes and good Black Alicante, with specially good Sea Eagle Peaches and Victoria Nectarines, as well as excellent Figs and Pears. Mr. Goodacre (gardener to the Earl of Harrington, Elvaston Castle), who came in third, had a collection below his usual standard—two quite small Pines, giving but a poor idea of British Pine culture. For a collection of eight kinds of fruit, Mr. Reynolds (gardener to Messrs. de Rothschild, Gunnersbury Park) was placed first with an admirable collection, the fruits being very fresh and none too ripe. This comprised an extra fine Melon, Sutton's A1, well-coloured Muscat and Gros Maroc Grapes (the latter with large berries), Sea Eagle and Thames Bank Peaches, both well coloured, a fine dish of Ribston Pippin Apples, good Pine-apple Nectarines and Coe's Golden Drop Plums. Mr. F. Harris (gardener to Lady Henry Somerset, Eastnor Castle) came in a close second, having the same sorts of Grapes as in the previous case, two fine dishes of Peaches (Lord Palmerston and Gladstone), also two of Nectarines Pine-apple and Albert Victor, with a fine dish of Coe's Golden Drop Plums.

Grape Classes.

These were not on the whole so good as last year. This was most noticeable in the Muscats, Madresfield Court and other fine Grapes, as Duke of Buccleuch. There was, on the other hand, an absence of badly-coloured exhibits in both black and white kinds. The average size of the bunches, taken as a whole, was less than usual.

Mr. Goodacre showed strongly in the class for six kinds of Grapes, two bunches of each, the dozen bunches making a fine display. The sorts were Barbarossa, extra good, close shapely clusters, with large berries well coloured; Muscat of Alexandria, remarkably fine in colour and in bunch; Gros Colman, with extra large and beautifully finished berries, and the bunches of good proportions; Lady Downe's, well shouldered, a feature not often seen, the colour very dense and berries large; Mrs. Pearson, also excellent and clear in the berries, a fine counterpart to the preceding, with Alicante of good average quality. Mr. Reynolds, who followed, had a very even and well-finished exhibit, in which Chasselas Napoleon stood out quite distinct, very large, clear in the berry, conforming in colour more nearly to the definition "white" than any other Grape. Mr. Taylor (gardener to Mr. C. Bayer, Forest Hill) also showed strongly in this class, his finest being Madresfield Court (the best in the show), Gros Maroc and Alicante, both extra good in every sense.

For three varieties in half-a-dozen bunches, the competition was not nearly so good as last year; the prize-winner may consider himself fortunate in being awarded that position, the second being decidedly the better exhibit. Mr. P. T. Phillips, Whitfield (gardener Mr. Belcher), was first, the sorts being Alicante, one large and one small bunch, fine in berry; Gros Colman, extra fine bunches and immense berries; and Lady Downe's, well coloured and even, but with one bunch rubbed in transit. Mr. C. J. Massey, Garlieston (gardener, Mr. Day), was placed second, his exhibit indicating high-class quality, Mrs. Pince and Madresfield Court both being good—the whole a very even exhibit.

With Black Hamburgh, Mr. Taylor was first, showing this standard variety better than anyone else in the show, the colour being still good. Mr. Mitchell, Chilworth Manor, Romsey, was second. With Madresfield Court, Mr. Day was first, the bunches large and tapering and the colour good, but the berries small. Mr. Taylor followed very closely, the berries being the finer of the two. For Gros Colman, or Gros Maroc, Mr. Gibson (gardener to Earl Cowley, Chippenham) was a good first with the latter variety in its best and most characteristic style, with dense bloom and immense berries. Mr. Day, who followed, had equally good bunches, but smaller berries of more oval shape. Black Alicante was a very strong class, the majority of the exhibits being well finished. Mr. Reynolds was first with medium-sized, well-coloured bunches and berries above the average. Mr. Tate, Streatham (gardener, Mr. Howe), who was second, had much larger bunches, but with smaller berries. For any other black Grape, Mr. Mitchell was decidedly first with very handsome bunches of Mrs. Pince, of extra fine finish, the deepest blue-black, and the bunches dense and of good proportions. Mr.

Scrase-Dickens, Coolhurst, Horsham (gardener, Mr. Kemp), was second, with Lady Downe's of more than average quality in every point.

With Muscat of Alexandria, Mr. d'Arcy, Stanmore (gardener, Mr. Tidy), was first, the colour, a rich amber, being the strongest point, although the bunches were of good size and the berries large. Alderman Chaffin, Bath (gardener, Mr. Taylor), was a close second, the bunches being much finer, but the colour a shade less good. These two exhibits indicated, in our opinion, two distinct forms. For any other white Grape, Mr. Taylor, Forest Hill, was first with Buckland Sweetwater, unusually fine in berry, very clear and transparent in colour, and the bunches large. Mr. Reynolds was second with Chasselas Napoleon, again excellent. The next award gave cause for much comment, it going to Buckland Sweetwater of hardly moderate quality, whilst some splendid bunches of Mrs. Pearson were entirely passed over, these being very large in bunch and berry. Figs were at a discount, no prizes being awarded, the same remark applying to Vines in pots.

Tomatoes were staged in large numbers and of the highest quality, Mr. Howe being first with four varieties, all bearing the stamp of Perfection, the standard exhibition Tomato under whatever name it be shown; the sorts were Sutton's Perfection, Frogmore Selected, a fine form and very solid, Trophy, and Hackwood Park. Mr. Ryder, Orpington, Kent, was second, his best being Mayflower and Duke of York, both extra fine. The best single dish was found in Polegate, the fruits extra fine and weighty, from Mr. Helman, gardener to Viscount Gage, Firle Park, Sussex, Mr. Sanders, Halton, being second, also with large fruit (Ham Green Favourite), well ripened. For six clusters of Tomatoes in one variety only, Mr. J. Gore, Polegate, Sussex, was a comparatively easy first with Polegate, a form to all appearance of Perfection, the clusters being both heavy and well ripened, the average number of fruits to a cluster being between five and six. Mr. Wells, Bexley, was second, with the Old Red Improved, both good and heavy.

For a "collection of hardy fruit grown partly or entirely under glass to illustrate orchard house culture," the first prize was awarded to a collection of over sixty dishes of the best kinds known of Apples and Pears, with Plums, Peaches, and Nectarines, the entire collection showing but little affinity to orchard house fruit, not being so bright in colour even as many exhibits of similar fruits grown entirely outside, and singularly lacking in that clearness of skin and rich colouring indicative of such fruits grown under glass (the number of dishes evidently told). Mr. Martin Smith, Hayes Common (gardener, Mr. Blick) was the fortunate winner of the first prize, the best dishes being, of Plums, Grand Duke, extra fine; Reine Claude de Bavay, also good and of rich colour; and Monarch, of extra size and with a deep bloom. The best Nectarines were Pine-apple and Victoria, and the best Peaches, Sea Eagle and The Nectarine Peach, with good fruits of Pears, the finest being Doyenné du Comice, Magnate, Beurré Diel, Uvedale's St. Germain (why grow this Pear under these conditions?), Pitmaston Duchess, Princess, Conference, extra good, Durondeau, the same, and Beurré Hardy, with Marie Louise, Souvenir du Congrès, Louise Bonne, Emile d'Heyst, and Fondante d'Automne; whilst of Apples, the best were Emperor Alexander, Blenheim Orange (?), Ecklinville, and Cox's Orange Pippin. Mr. Potter, gardener to Sir Mark Collett, who was last year's first prize-winner, came in for the second award on this occasion. This exhibit, although of smaller extent, clearly indicated orchard house culture. The best dishes here were, of Plums, Grand Duke, fine; Pond's Seedling, clear; Monarch, Coe's Golden Drop, Green Gage, Kirke's and Ickworth; of Pears, Souvenir du Congrès, Beurré Baltet père, Marie Louise d'Uccle, Triomphe de Vienne, extra fine and clear, Doyenne Boussoch, Durondeau, Duchesse d'Angoulême, Pitmaston Duchess, General Todtleben and Beurré Bachelier; of Apples, Jefferson and Melon, both very clear in the skin; Peasgood's Nonsuch and Hoary Morning, both alike good; Fearn's Pippin, Wealthy, Belle Dubois, and Lord Suffield. Mr. McIndoe, who followed, had also chiefly orchard-grown examples of high class quality, Plums, Apricots and Peaches being strong points.

Nurserymen's Classes Only.

The competitors in these classes were very highly favoured in one respect, viz., the only two gold medals offered in the entire schedule were to be won here, but, on the other hand, no minor award was offered in either class. This fact must, we think, have deterred some growers from competing. The way in which these several classes were specified and grouped afforded a wide scope for variety in arrangement. This the exhibitors took advantage of in a most effective manner, but more than one clearly transgressed the resolution of the fruit committee that no duplicate dishes should be staged in any one exhibit. This should not on any account be allowed, nor is it fair to those who comply with the regulations laid down. Be the fruit ever so good, it is not desirable to copy the fruiterer's-shop element.

For a collection of fruit trees in pots, Messrs. Rivers and Son staged a magnificent exhibit in every sense worthy of their reputation as the pioneers of orchard house culture in this country. It is doubtful if this firm ever made such a splendid cultural display in this particular branch before. It was both comprehensive in character and abundant in variety. In the centre of the group was a fine example of Salway Peach, bearing when it left the nursery some eighty fruits, some of which were shaken off in transit. Apples were represented by grand fruits of Cox's Orange Pippin, rich yellow in colour; Peasgood's Nonsuch, the fruits of immense size and very clear; Gascoigne's Seedling, very bright and handsome, and Wagener, a comparatively unknown Apple. With these were beautiful examples of Crabs, which as decorative trees were ideals of such. Pears were also of first-class quality, the most noticeable of these being Doyenné du Comice, Conference, Louise Bonne, Vicar of Winkfield and others. Vines Golden Queen, Black Alicante, Directeur Tisserand and White Tokay, all had heavy crops of well finished Grapes. Gathered fruits of various kinds clearly indicating orchard-house treatment were also included, but these were "not to be taken into account by the judges." Why not? The gold medal of the society was most deservedly awarded.

For a collection of hardy fruit grown partly or entirely under glass to illustrate orchard-house culture, Messrs. Bunyard came out victorious with grand examples of their Kentish grown fruit, the arrangement of which was very tasteful and effective. This exhibit comprised amongst other fine dishes the following: Of Pears, Souvenir du Congrès, Durondeau, Doyenné Boussoch, Dr. Jules Guyot (a handsome Pear) and Beurré Mortilet; of Apples, Bietingheimer Red (very fine), Ribbed Greening, Blenheim Orange, Ribston Pippin (extra fine), Alexander, Washington, Rosemary Russet and Ecklinville; and of Peaches, Sea Eagle and Princess of Wales, with Appley Towers Grape, Plums and Figs, the whole of high-class quality. The silver-gilt medal was awarded this exhibit.

Messrs. Bunyard and Co. were also winners in the following class for a collection of hardy fruits of not more than 100 distinct varieties grown in the open, the gold medal in this instance being the well merited award. In such a large display as this, only the names of the very finest can be given. There were of Apples, Mère de Ménage, Queen Caroline, Golden Spire, Ecklinville, Lord Suffield, Pott's Seedling, Tower of Glamis, Mrs. Barron, and Bismarck; and of Pears, Pitmaston Duchess, Souvenir du Congrès, Gilogil, Fondante de Thirriott, Williams' Bon Chrétien, and Dr. Jules Guyot, very fine; and Figs in the best varieties. Grapes and other hardy fruits were included. In the smaller class for fifty varieties under the same conditions, Mr. H. Berwick, Sidmouth, was the winner of the silver-gilt medal; this collection comprised most admirable examples of high-class fruit, the entire arrangement being most effective. The best kinds here shown were of Apples, Peasgood's, Emperor Alexander, Cellini Pippin, Blenheim, Worcester Pearmain, and The Queen; of Pears, Beurré Clairgeau, Grosse Calebasse, Marie Louise, Souvenir du Congrès, and Maréchal de la Cour; of Plums, Grand Duke, Coe's Golden Drop, and Reine Claude de Bavay, with Quinces, Medlars, Figs, and Cherries. For fifty distinct varieties of Pears in baskets or dishes, Mr. Watkins, of Pomona Farm, Hereford, was awarded the silver-gilt medal. A few of his best dishes, all of which were deserving of mention, were those of Marie Benoist, Clapp's Favourite, Beurré de Capiaumont, Fondante d'Automne, Pitmaston Duchess, Beurré d'Amanlis, and Marie Louise. This was a very instructive and beautiful display of Pear culture, and highly creditable to this well-known cultivator. The remaining award in this division again fell to the lot of Messrs. Bunyard and Co., who thus won three of the six medals awarded. This was for a collection of not more than fifty distinct varieties of Apples grown in the open air, the silver-gilt medal again being the award. The finest in this, a very fine exhibit, were Bismarck, Grenadier, Cox's Pomona, Royal Jubilee, Mrs. Barron, Golden Noble, New Hawthornden, Striped Beaufin, Blenheim Orange, The Queen, and Lord Grosvenor, the whole forming a most imposing display of the best kinds.

Fruits Grown in the Open Air.

In this division were some of the finest fruits that could possibly be staged. They did not perhaps equal in size some of those in the single dish classes, but there were good quality and finish in nearly all the collections. The first prize was awarded to Mr. G. Woodward, Barham Court, Maidstone, for eighteen dishes (twelve cooking and six dessert), and a splendid lot was staged. Peasgood's Nonsuch, Lord Derby, Stone's, Gascoigne's Scarlet, Washington, Belle Pontoise and Tyler's Kernel were very fine. Of the dessert kinds, Ribston, Cox's Orange, Baumann's Red Winter Reinette and Cornish Aromatic were remarkable for their splendid colour. Mr. Geo. Goldsmith, Leonardslee, Horsham, was a good second, and had some very fine dishes—Emperor Alexander, Lord Derby, Mère de Ménage, Cox's Pomona, Cellini Pippin (a splendid dish). The Queen (specially fine), Cox's Orange and Ribston being good. In the next class the competition was much stronger, no less than fourteen lots being staged, and though the fruits were little inferior in quality, these collections were much admired. Mr. T. W. Startop, Maidstone, was first. In his lot were splendid Warner's King, Lord Derby and Gascoigne's Scarlet, the last-named grandly coloured. Cox's Orange Pippin, Ribston Pippin and Baumann's Red Reinette were also good. Mr. A. T. Killick, Maidstone, was a good second, having several of the varieties named above in his collection. In the class for nine dishes (six cooking and three dessert) there were no less than sixteen competitors, Mr. Turton, Maiden Erleigh, being first with fine fruits of Loddington Seedling, Emperor Alexander, Cox's Pomona, Peasgood's Nonsuch, Warner's King and Mère de Ménage, with grand dessert fruits, the varieties being King of Pippins, Ribston Pippin and Cox's Orange. The second place was taken by Mr. S. H. Goodwin, Mereworth, who had very fine Peasgood's Nonsuch, Blenheim Orange and Yorkshire Beauty. The competition was equally good for the best six dishes of cooking Apples. Mr. Woodward was a good first, staging fruit of immense size, weight, and rich colour. Mr. S. T. Wright, Glewston Court, Herefordshire came second with fruit little inferior to the above. He had grand examples of Warner's King, Peasgood's Nonsuch, Lane's Prince Albert, and Ecklinville. Thirteen collections were staged. In the class for three dishes there were twelve competitors, Mr. R. C. Sanders, Halton, Tring, being first with good

fruits of The Queen and Emperor Alexander. In the class for six dishes of dessert Apples there were thirteen competitors. The Ribston and Cox's Pippin were remarkable for size, colour, and good shape. Rarely has such fruit and in such quantity been staged. The premier award again went to Kent, Mr. Woodward securing the same with grand examples of Washington splendidly coloured, Ribston Pippin, Red Reinette, Cox's Orange, Lady Sudeley, and Calville Rouge Précoce, Mr. G. Goldsmith being a close second with, amongst others, very good Gravenstein, Egremont Russet and Adams' Pearmain. No less than thirteen competed for the three dishes of dessert. Mr A. Kemp, Horsham, was first with nice fruits of American Mother, Ribston, and Cox's Orange.

The classes for Pears created much interest, and though the quality was good and the fruits large enough for all purposes, these fruits, as regards size, did not compare favourably with Apples in the collection. Some grand fruits were staged, and there was more colour than last year. The prizes in this the large class went to Kent and Herefordshire. For twelve dishes of dessert Pears Mr. G. Goldsmith led with really superb fruits of Pitmaston Duchess, Duchesse d'Angoulême, finely shaped fruits of the newer Princess, Beurré Diel, Marie Louise d'Uccle, Louise Bonne of Jersey, Gen. Todtleben, Durondeau, Beurré Clairgeau, Flemish Beauty, Beurré Superfin, Doyenné du Comice, and Marechal de la Cour. Mr. Woodward had smaller fruits in his second prize lot, but all really excellent in other respects. For twelve dessert Pears there was more competition, eight lots being staged. Mr. Cotterill, Tonbridge, was first, having fine Beurré Clairgeau, B. Bosc, B. Superfin, B. Rance, Pitmaston Duchess and Duchesse d'Angoulême. Mr. W. Pragnell was second with equally good fruits, but not equal in colour. For nine dishes there were seven competitors, Mr. J. Gibson, Chippenham, taking the premier award with nice fruit, having highly-coloured B. Clairgeau, fine Triomphe de Vienne and Alexandre Lambre; Mr. Burton was second, having fine Marie Louise and Flemish Beauty. In the class for six dishes there were eight competitors, Mr. Bannister leading with good dishes of Pitmaston, Conseiller de la Cour (very fine) and Durondeau. This exhibit was noticeable for the fine colour of the fruits, Mr. Slogrove, Reigate, being second. For three dishes there were eight lots, Mr. Fennell, Tonbridge, being first, having fine Margaret Marillat; second, Mr. G. H. Field, Sevenoaks. Stewing Pears were numerous and large; some appeared to have been grown under glass. For three dishes Mr. Woodward had very heavy fruits of Catillac, Vicar of Winkfield and General Todtleben; second, Mr. Cotterill. For a single dish Mr. Masterman was first with Uvedale's St. Germain.

Peaches, for which there were only two classes, were well shown. For three varieties, Mr. Woodward secured the premier award with grand fruits of Sea Eagle, Princess of Wales and Nectarine Peach, Mr. Herrin, Dropmore, being a close second with a trifle smaller fruits, but of fine colour. For the single dish, Mr. Richards, Streatham, was first with Barrington, a grand late variety; second, Mr. Markham, Mereworth. There was only one exhibitor of Nectarines, Mr. Goldsmith taking the prize for three dishes of medium-sized fruits not named.

Plums were plentiful and good considering the season. Mr. McIndoe was first for four dessert kinds with excellent fruits of Nonsuch, Golden Drop, Jefferson and Bryanston Green Gage; Mr. J. Day, Garliestown, being a close second with fine dishes of Reine Claude de Bavay and Lawson's Golden Gage. For one dish, Mr. Herrin was first with Golden Drop, Mr. Rickwood second. For four dishes of cooking Plums there was a good competition, Mr. Day being first with very fine Pond's Seedling, Goliath, Magnum Bonum, and Victoria, Mr. McIndoe being second with smaller fruits. For one dish, Messrs. Empson and Sanders took the awards in the order named, Monarch being staged. In the class for Gage Plums, Mr. Hill, Cambridge, was first with Reine Claude de Bavay, Mr. McIndoe being second. Damsons and Prunes were shown largely, Mr. Fennell being first, having very large fruits of Cluster King Prune and the common variety, Mr. Killick being second. The first prize for Bullaces went to Mr. Tebbutt, Isleworth, for a large yellow variety, Mr. Wells, Bexley, being second. Some very fine Morello Cherries were staged, there being nine lots. Mr. Masterman was first. The prizes for Nuts of any kind did not bring many competitors, considering what a prolific season it is for most kinds. Mr. Turton was first. In these cases they exceeded the number allowed in schedule, which should be strictly adhered to. There were no less than thirteen lots of Quinces staged, mostly good and well coloured, Mr. W. Mitchell, Romsey, Hants, being first. There were only twelve classes this year for dessert Apples, this doubtless admitting of the cream being staged. For the best dish of the following varieties we give a brief list, Mr. Turton being first for Adams' Pearmain and Mr. McKenzie second. For Cox's Orange Pippin there were forty-five competitors, showing the value of this good old variety, Messrs. Turton and Wright being successful with very fine fruits. King of the Pippins was equally numerous, Mr. Wyatt, Hatton, Hounslow, and Mr. Turner, Brighton, taking the awards. Mannington Pearmain was less numerous, Mr. Turton being first and Mr. Potter second. Margil was good, Messrs. Spencer and Wyatt taking the awards. Seven competed for American Mother, Messrs. Mackenzie and Spencer being successful. Reinette du Canada was good, Mr. Woodward being an easy first with large fruits, and Mr. Munro, Beckenham, second. For Ribston Pippin thirty-nine competitors entered, some remarkable specimens being staged, Mr. Ocock, Rudgwick, being first with a splendid dish. Six entered for Rosemary Russet, Messrs. P. Cavanagh, Roehampton, and T. Turton being successful. For Scarlet Nonpareil eight lots were staged, Messrs. Empson and McKenzie being first and second in the order named. For Worcester Pearmain, Messrs. Wakefield, and Killick, Maidstone, were the prize-takers. For any other variety thirty lots were staged, Mr. Mackenzie winning easily with a grand dish of a new Apple named St. Edmund, a beautiful fruit with a russet skin, and said to be a good keeper.

Cooking Apples were shown well and of large size. In the single dish classes for Alfriston, Messrs. Mackenzie and Woodward were the prize-takers. Bismarck was shown by twelve exhibitors, Messrs. Mackenzie and Woodward heading the list. Blenheim Orange was represented by twenty-nine dishes, Mr. Ross, Newbury, and Mr. Killick being successful. For Bramley's Seedling twelve competed, Messrs. Killick and Woodward taking the awards. Cellini was numerous and beautifully coloured, Messrs. Killick and Mackenzie being the successful exhibitors. Cox's Pomona was shown by twenty-three competitors, Messrs. Ross and Goodwin being successful. Duchess of Oldenburg was good, Messrs. Wright and Goodwin being the winners. For Wellington the awards were not creditable to the judges, who awarded the first prize to a dish of Hawthornden. This was reversed later in the day, Messrs. Ridgwell and Ross being successful with grand fruits. Mr. Mackenzie headed the class for Ecklinville, twenty-three lots being staged. Emperor Alexander was put up by twenty exhibitors, enormous fruits being staged, Messrs. Mackenzie and Buxton, Chertsey, being the winners. The same remarks apply to Gascoigne's Scarlet, Messrs. Mackenzie and Goldsmith securing the awards. Golden Noble was perfect, Messrs. Woodward and Mackenzie taking the awards. Hawthornden was superb, Mr. Mackenzie being first. Lane's Prince Albert was equally good, Mr. Ross having a grand dish; Mr. Prinsep, Buxted Park, second. Lord Derby was staged by twenty-two competitors, Messrs. Goldsmith and Woodward receiving the awards. Lord Suffield was very fine, Messrs. Turton and Mackenzie leading. Mère de Ménage was a grand class, colour being superb, Messrs. Mackenzie and Spencer being successful. Northern Greening was larger than usual, Messrs. Prinsep and Jones, Carshalton, being successful. For Newton Wonder there was a special prize, but not many competed, Messrs. Goldsmith and Harris, Croydon, taking the awards. Peasgood's Nonsuch brought out nineteen lots, all excellent, Messrs. Mackenzie and Woodward dividing the prizes. Stirling Castle was largely shown, Mr. Ross having a grand dish. Tower of Glamis was very fine, Messrs. Woodward and Ross taking the awards. For Warner's King, Messrs. Mackenzie and Woodward were first and second. Any other variety brought forth twenty-nine competitors, Mr. Mackenzie being first with Belle Dubois, Mr. Woodward second.

Pears were very good and equally numerous. For the best Beurré Diel, Mr. Wythes, Syon, Brentford, was first, having fine fruits with clear skins. Beurré Hardy was very good, Messrs. Woodward and Prinsep being most successful. Beurré Superfin was not largely shown, Messrs. Woodward and Goldsmith dividing the awards. There were fifteen lots of Maréchal de la Cour, Messrs. Sanders and Herrin being most successful. For the newer Conference Mr. Woodward was placed first, but the second lot of Mr. Wythes' was superior, being better finished, clearer in the skin, and equally large. Judging certainly was erratic in some cases. Doyenné du Comice was a fine lot, Messrs. Goldsmith and Woodward having grand dishes. Messrs. Woodward and Goldsmith had the best Emile d'Heyst. The best Glou Morceau came from Mr. Goldsmith. Mr. Ross had the finest Josephine de Malines, and Mr. Goldsmith the best Louise Bonne of Jersey. Marie Louise was exceptionally fine, Messrs. Burton and Goldsmith having the leading dishes The best Nouvelle Fulvie came from Mr. Wythes. Souvenir du Congrès from Mr. Thompson, Hounslow, was very fine. Thompson's was very fine from Mr. Goldsmith. For Winter Nelis, Messrs. Prinsep and Goldsmith had the awards for very fine examples.

Dried Fruits.

There was little competition in the classes for dried fruits, but Mr. Trotter, of Ledbury, was deservedly first in every class. In his collection he showed Plums, Cherries, Pears, and Apples, the latter in rings, whole and cored fruits. The other classes were Apples sliced one pound, Apples whole one pound, and the same amount of Plums and Cherries, also whole. This was a most attractive exhibit, and clearly showed that fruit growers might combine to preserve surplus fruit, and if of the same excellent quality as shown here there is no doubt it would find a ready market. Mr. B. W. Bull, of Billericay, showed in two of these classes and received second prizes.

In the class open to market growers only, for six varieties of hardy fruits grown in the open air, two gallons of each, Mr. S. H. Goodwin, of Mereworth, was first. He showed Apples Lady Henniker, Cox's Pomona, Stone's, Blenheim, Cox's Orange, and Doyenné du Comice Pear, all admirable and highly coloured samples of their kinds. Mr. G. Tebbutt, of Isleworth, was second, showing Apples, Pears, and Plums, two varieties of each.

In the packing classes, Mr. R. Grindrod, Whitfield, was first for a bushel of a cooking Apple and a half-bushel of a dessert kind. The fruits were packed in layers in baskets with a pad of wood wool and paper between each layer. The great advantage of this packing was that the quality of the fruit could be seen at a glance. The second prize went to Mr. Cotteril gardener to Mr. W. Gear, Tonbridge. The best packed basket of Grapes came from Mr. C. Cooper, Sunninghill, Berks, whilst the second prize went to Mr. J. Gore, Polegate. Mr. Wells, gardener to Mr. F. J. Arbuthnot, Bexley, was first for the best packed box of Peaches, Mr. Grindrod being second. For a similar exhibit of ripe Pears, Mr. Wells was again first and Mr. A. Pentney, Isleworth, second.

Miscellaneous.

The miscellaneous exhibits made up a large portion of the show, and the collections of fruit

from some of the trade growers were very fine indeed, as also was that staged by Mr. Thomas from the Royal Gardens, Frogmore, which filled a large table and was admirably set up. The finest Apples were Ribston, Gloria Mundi, Wellington, Annie Elizabeth, Stone's, Emperor Alexander, Blenheim, Cox's Orange, Warner's King, Schoolmaster, Royal Russet, The Queen, Mère de Ménage and Peasgood's Nonsuch. The following Pears were also very fine: Louise Bonne of Jersey, Triomphe de Vienne, Marie Louise, Duchesse d'Angoulême, Pitmaston Duchess and Brockworth Park. A very large display was made by Messrs. J. Veitch and Sons, their Apples especially being fine. The best were Cox's Orange, Potts' Seedling, Ribston, Tyler's Kernel, Cellini, Blenheim, Peasgood's Nonsuch, Mère de Ménage, Fearn's, Bismarck, Gascoigne's, Tower of Glamis, Belle de Boskoop (a fine Apple like a long Ribston), King Harry, Bramley's, Lane's, Lamb Abbey Pearmain and Lady Lennox, a fine keeping Apple from the midlands. Among Pears, Marie Louise, Triomphe de Vienne, General Todtleben, Doyenné du Comice, Flemish Beauty, Soldat Laboureur, Beurré Bachelier, Fertility, Senateur Vaisse and Louise Bonne of Jersey were all noteworthy. Other fruits well shown in this lot were Raspberry Superlative, proving it to be a good successional fruiter; Plums in variety, Currant White Grape, King of the Damsons, a very fine fruited kind, Alpine Strawberries and the cut-leaved Blackberry. The new Physalis Franchetti was also well shown in this collection, which consisted of 100 dishes of Apples, the same number of Pears, and fifty of various fruits. Messrs. Charles Lee and Son, of Hammermith, showed a meritorious lot of Apples and Pears, their best dishes of Apples being Peasgood's, Lord Suffield, Cellini, Potts' Seedling, American Mother, Betty Geeson, Lane's Prince Albert, Warner's King, Golden Spire, Blenheim, Manks Codlin, Reinette du Canada, Stirling Castle, Mère de Ménage, and Wellington. The finest Pears were Marie Louise, Hacon's Incomparable, Beurré d'Anjou, Souvenir du Congrès, Fondante d'Automne, Louise Bonne of Jersey, Pitmaston Duchess, Brockworth Park, Durondeau, Olivier des Serres, and the new Princess. From Gunnersbury Park Gardens Mr. G. Reynolds showed a smaller, but first-rate collection, Emperor Alexander, Sandringham, Gloria Mundi, Gascoigne's Scarlet, Beauty of Kent, Alfriston, Ribston, Annie Elizabeth, and Cox's Orange being fine among the Apples, and Pitmaston Duchess, Brockworth Park, Urbaniste, Durondeau, Doyenné du Comice, and Knight's Monarch the best Pears. A very interesting collection of Pears, in all seventy-five varieties, was that shown by Mr. Barron from the society's gardens at Chiswick. The best dishes were those of Conference, Jersey Gratioli, Mme. Andre Leroy, Marie Louise and Marie Louise d'Uccle, Louise Bonne of Jersey, Winter Nelis, Doyenné Boussoch, Beurré Diel, Bellissime d'Hiver, Souvenir du Congrès, Des deux Sœurs, Col. Clarke's Seedling, Emile d'Heyst, Doyenné du Comice, Thompson's, Pitmaston Duchess, Zephirin Gregoire, Maréchal de la Cour, and Comte de Lamy. Messrs. J. Cheal and Sons exhibited Apples and Pears very fine indeed, large size and good colour especially characterising their Apples. Bismarck was well and largely shown, and besides the gathered fruits two year old trees were shown bearing fine fruits and testifying to the early fruitfulness of the kind. The Queen, Blenheim, Cox's Orange, highly coloured, Stirling Castle, Yorkshire Beauty, Lord Derby, Wellington, King of the Pippins, Frogmore Prolific, Hollandbury, and Loddington were all good; and in Pears, Beurré Niger, a large green Pear, in shape resembling Easter Beurré, was a prominent kind, whilst Brockworth Park, Princess, Van Mons Leon Leclerc, and Louise Bonne were all noteworthy for size and colour. Messrs. Laing and Sons, of Forest Hill, were large exhibitors of Apples and Pears of fine size and high quality, Stirling Castle, Lord Suffield, Bess Pool, Cellini, King of the Pippins, the Queen, Annie Elizabeth, Sandringham, Hanwell Souring, a fine dish of this long keeping kind, Cornish Gillyflower, Alfriston, Cox's Orange, very good, Ribston and Fearn's being noteworthy. The best Pears were Duchesse d'Angoulême, Pitmaston Duchess, Brockworth Park, Louise Bonne of Jersey, Glou Morceau, Passe Crassane, Marie Louise, and Nouveau Poiteau. Some well-fruited orchard house trees were also shown in this collection. Messrs. Spooner, of Hounslow, showed a good lot of Apples and Pears, their finest being Stirling Castle, Warner's King, Stone's, Cellini, Wellington, Alfriston, Golden Noble, and Lord Derby, with Windsor, Pitmaston Duchess, Marie Louise, and Souvenir du Congrès Pears. Messrs. Peed and Sons, of Norwood, made a meritorious display, several kinds being well shown, notably Bismarck, Old Hawthornden, Stirling Castle, Cox's Pomona, Cellini and Ribston Apples, and Pears Flemish Beauty, Margaret Marillat and Pitmaston Duchess. A dish of Nectarine Humboldt was also shown, the fruits, which were of medium size and good, having been gathered from a standard tree growing in the open air. Messrs. W. Paul and Sons, of Waltham Cross, showed well-fruited orchard house trees and an admirable lot of outdoor fruit, chiefly Apples. Some good Pears were shown besides. The great display of Tomatoes made by Messrs. Sutton and Sons, of Reading, proved how favourable the present season has been to this fruit, as the whole of that shown was grown and ripened out of doors. The fruits hung upon the stems like ropes of Onions. In all, thirty-seven varieties were shown, representing every type of this fruit, from the little cluster and Pear-shaped kinds to the large solid fruits that individually turn the scale at a pound. Earliest of All was remarkably profuse in cropping, whilst in Best of All, Maincrop and Perfection we have a trio of the best kinds. Golden Perfection is quite a counterpart of the older Scarlet Perfection, and has a large solid fruit. Others extra fine were Tender and True, Sunbeam, Golden Nugget and Frogmore Selected.

The new Duke of York Tomato was admirably shown by Messrs. Fellows and Ryder, of Orpington, about twenty dishes, each having nine fruits, all fine solid examples of this grand variety. A few miscellaneous floral exhibits gave a welcome variation and a charming finish to the show. Mr. H. J. Jones, of Lewisham, arranged a large and graceful group of flowering and fine-foliaged plants, Chrysanthemums and Begonias predominating. Messrs. Laing and Sons, of Forest Hill, also had a prominent and beautiful group of Palms, Crotons, Caladiums, Dracænas and Begonia Rex in a number of lovely forms all tastefully arranged. Roses in large clusters, fine and fresh, were extensively shown by Messrs. W. Paul and Son, of Waltham Cross, showing what a glorious autumnal bloom Roses have given this year. Mr. T. S. Ware had a large group of double-flowered Begonias, and he also made a rich display of Dahlias in all sections, while another fine group of this flower came from Messrs. Cheal and Sons, Crawley. Hardy flowers were represented by two noble groups. That from Mr. M. Prichard was a gay mass of Starworts, perennial Sunflowers and Phloxes, whilst an equally fine lot from Mr. Ladhams had, in addition to the above-named flowers, Helenium striatum in beautiful colour, Lobelia fulgens in variety, and Ernest Ladhams Pink in quantity. Messrs. W. Cutbush and Son showed large and heavy fruits of Tomato Polegate and a beautiful lot of a very charming new single Dahlia, which we have noted elsewhere. Messrs. Veitch showed Magnolia Watsoni (second blooms) and Berberis Thunbergi in brilliant colour with its autumn-tinted leaves and scarlet berries.

National Chrysanthemum Society. — A meeting of the general committee of this society was held on Monday evening last at Anderton's Hotel, Fleet Street, when Mr. B. Wynne occupied the chair. After the minutes of the previous meeting were read and confirmed, the secretary read a form of special circular to be sent out respecting the society's jubilee next year, and also stated that the schedule was in course of preparation. Already several handsome prizes have been offered for competition next year, and it is hoped that there will be a heavy response to the appeal for special prizes and funds to enable the jubilee celebration to be carried out in a fitting manner. Some colonial correspondence was read, including letters from New Zealand, South Africa and Australia. A pattern small silver medal was submitted for approval, and it is proposed that it shall rank between the society's bronze medal and the silver one now in use. It was announced that prize money to the value of £11 10s. was awarded at the recent September show for early Chrysanthemums, and two medals, viz., a silver one for a group exhibited by Mr. Davis and a bronze one to Mr. Shaw, were confirmed on the judges' recommendation. A rough financial statement was submitted, showing the receipt of income amounting to £156 16s. 11d. to the present date. Fifteen new members were elected and two Fellows, and the Hertford Horticultural Society was admitted in affiliation.

Obituary.

MR. PETER GRIEVE.

I am sorry to record the death of this well-known gardener on Thursday, September 26, at the age of 83. For several years Mr. Grieve had been known to suffer from heart disease. Fond as he was, when well, of sending notes to the gardening papers, he had almost left them off of late in deference to his health. His love of gardening continued as strong as ever till the last, and few have been able to accomplish more for the cause than Mr. Grieve. It has been my privilege to live near him and work with him in many things horticultural for nearly fifty years, and during that long period I always found him a firm friend. As a cultivator, a propagator, and landscape gardener, Mr. Grieve displayed great ability and taste. Culford Gardens, which he formed and superintended for nearly thirty-five years, were, and are, his highest testimonial. The noble Yew hedges that enclose the quarters of the kitchen garden, which he planned and planted, show the regularity and boldness of his designs. The flower garden and other flower beds and borders were models of form and colour for years. The tricolor, bicolor, and bronze Pelargoniums raised by him, and which were all the rage for years, were assuredly beautiful and popular in their time. Even so-called anti-colourists will admit that something was gained by taking the glare of Pelargoniums out of their flowers and painting it on their leaves. All this, and much more, Mr. Grieve did for the tricolor Pelargoniums. But the man was better than his work. A more genial friend and kinder neighbour none could desire. His widow survives him. His only daughter, Lucy Grieve, who raised the Pear bearing her name, died some years ago.

D. T. Fish.

Names of plants.—*K. G.*—Euonymus europæus latifolius.——*S. T. Spear.*—Centranthus ruber (Red Valerian).——*W. Cuthbertson.*—1, Vittadenia trilobæ; 2 and 3, forms of Centranthus ruber.

Names of fruit.—*W. H. S.*—Apple King of the Pippins; Pear Duchesse d'Angoulême.——*J. G. C.*—4 Marie Louise d'Uccle; 1, not recognised.—*Dr. Legge Paulley.*—1, French Crab; 2, Ashmead's Kernel.——*J. C. Ross.*—1, Souvenir du Congrès; 2, Doyenné Boussoch.——*J. G. P. C.*—Please send under numbers all fruits for name; yours had no numbers attached.——*A. Powell.*—1, Apples (large eye) Blenheim Orange; 2, Cox's Orange Pippin; 3, Pear Beurré Bosc.——*D. Carter.*—1, Beurre Clairgeau; 2, Duchesse d'Angoulême; 3, Nouvelle Fulvie (?); 4, too rotten to identify; 5, Doyenné Boussoch; Apple not recognised.——*R. D.* Apple not recognised.

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"This is an Art
Which does mend Nature; change it rather; but
The Art itself is Nature."—*Shakespeare.*

ORCHARD AND FRUIT GARDEN.

OUTDOOR GRAPES IN SURREY.

Several years ago there was a discussion in The Garden with respect to the practicability of cultivating certain Grapes on open walls in the warmer districts of this country. I then stated that in former years this form of Grape culture was much practised in the south of England, and that in most years the fruit ripened well when the Vines got good cultivation. I mentioned that in my boyhood, cottages, farm buildings, and outbuildings on gentlemen's estates were in a general way clothed with Vines, carrying in ordinary years good crops of well-ripened berries. At the time the discussion took place I showed what had been written to some of the older inhabitants of the district, and they one and all assured me that I had in no sense exaggerated. I may be told that this is an exceptional season and that we are not likely to be often favoured with such abundant sunshine; but not so many years ago wet summers and cold autumns were more the exception than the rule, and a season so wanting in warmth that the berries were not sweet and pleasant to the taste was very rare indeed. If we could be favoured with a return of the old-fashioned summers, Grape culture on open walls would again become popular. To such an extent were outdoor Grapes grown in this part of Surrey at least, that even the roofs of many buildings and one-storied dwellings were covered with trellis-work, on which the Vines grew and fruited freely. I would ask your readers if it is likely that anyone would incur the expense of fixing up a substantial trellis unless assured that the fruit grown thereon would ripen. As a fact, I have seen bushels of black and white Grapes grown in this way, and very pretty these Vine-clad roofs looked, especially when loaded with ripe fruit. Of these trellised roofs not one that I knew of remains, and ninety-five per cent. of the Vines, that were a source of pride and frequently profit, have disappeared. Curiously enough, the decline in this form of hardy fruit culture commenced when bad times for the farmers set in, these being—as some of your readers may remember—heralded by a series of inclement seasons so wet and cold, that unripe corn stood at the foot of the Surrey hills in October and Couch Grass came halfway up the stalks thereof; in fact, our climate seemed all at once to change. The Vines were attacked by mildew, which never happened before, and many half a century old died right out. Cottagers and others had not the heart to plant young Vines, and so open-air Grape culture has almost died out.

With respect to the Grapes sent, I may say that they were sweet before this last spell of intense heat set in; they could have been eaten in the first week of September. Moreover, the Vine which produced them is on an east wall, not quite the best aspect for outdoor Grapes. Possibly we are nearing the end of the long cycle of more or less bad years, and may hope for more favourable conditions for hardy fruit generally. In two years out of three, Grapes have ripened on open walls, and the abundance of hardy fruit in gardens and orchards reminds one of the fruitful seasons of thirty years ago. As regards Grapes, times have changed, and the culture of home-grown fruit has increased to such an extent that well-flavoured Hamburghs are retailed at very low rates. The finest summer possible cannot make outdoor Grapes equal them, but they are at least as sweet and much more wholesome than the thick-skinned "grocer's grapes" that are consumed in quantity in this country. I am not sure that we have the most suitable kinds for open air. When in France I passed through my hands upwards of 400 varieties of outdoor Grapes, some of them very early and of tolerably good flavour, very much better in this respect than the common White and Black Cluster. Will not some reader of The Garden having convenience give some of them a trial; they ought to be procurable from the French nurserymen, especially from those living in the south of France?

Byfleet, Surrey. J. Cornhill.

Open-air Figs.—The kindly criticisms of Mr. D. T. Fish on the cultural notes on this fruit by "W. G. C." and myself are well worth noting, as they come from the pen of one the greater portion of whose life has been spent in a district celebrated for its luscious Figs. I am glad to find that the ideas of Mr. Fish and myself as to what constitutes the proper treatment for outdoor Figs are very similar, although we differ on a few minor points. I have seen the fishing-rod shoots of which he speaks, the result of planting in too rich a border and laying in too few growths, in which all the sap is concentrated, grossness following. I think, however, that while the knife ought to be used with discretion, the weakest growths should certainly be removed, their presence hindering the ingress of sun and air, and thus retarding the maturity of the fruit-bearing wood. The removal of this would not, I think, add perceptibly to the strength of or encourage grossness in well-managed trees whose roots are growing in a confined space and in a non-stimulating medium. The reason why I advised cutting this out in summer is that by so doing, the sun of July, August, and September can the better play on the shoots which are to remain intact, which cannot be the case if thinning is deferred till the autumn. In regard to protecting Figs in winter, I certainly think that where the trees are kept to the walls and a good thick covering of Bracken or straw, this being overlaid with old garden mats, can be given, almost any amount of frost could be excluded, the trees being again uncovered piecemeal in spring. It is useless, however, protecting one winter and not another, the reason being obvious. Trees that are allowed to grow in a free, unrestricted manner, as advised by Mr. Fish, and which is perhaps the most natural after all, cannot easily be protected, as all that could be done would be to distribute Bracken amongst the branches, as in the case of Tea Roses, and this, if frozen through after becoming saturated, would only make matters worse. As pointed out by Mr. Fish, those who contemplate planting Figs out of doors must guard against that too common and most fatal of all mistakes, a rich root-run. In reference to stopping the growths of Figs in summer, I quite agree with Mr. Fish that failure must follow such a practice, as the new growths resulting therefrom could never be expected to ripen in a climate like ours. —J. Crawford.

—— I think "D. T. F." (page 234) has scarcely understood my notes on the above in the way I intended. By a judicious system of pinching out the points of strong-growing shoots a decided check is given to Fig and other fruit trees, and I have never found any more force thrown into any part of the trees, except perhaps some of the weaker shoots have gained a little. I have brought many fruit trees of all kinds into a prolific habit by pinching out with the finger and thumb the points of the shoots and rubbing off any others that were not required, thus avoiding the labour of root-pruning to bring the trees into a fruitful state. As regards "D. T. F.'s" experience in providing hard borders with plenty of lime refuse for Figs, I entirely agree with him.—W. G. C.

The common Sweetwater Grape.—Mr. Iggulden's remarks on the extreme usefulness of the Sweetwater Grape for out of doors and cool vineries recalls some curious incidents in my experience in which the common Sweetwater has been preferred to the choicest Muscats. A lady of title was the first to call my attention to what she called a serious fault in Muscat Grapes. She condemned them as too meaty and as needing too much eating to be pleasant. I was a young man at the time and had done my utmost to produce several houses of Muscats of the orthodox golden colour, one of them being Cannon Hall Muscat of the size of Green Gage Plums. I was next invited to an unique tasting match, consisting of Muscat of Alexandria, Cannon Hall Muscat, and Buckland Sweetwater. The first was compared to heavy port, the second to sound sherry, the third to sparkling champagne, and it must be admitted that there were some solid reasons for this classification. I have met with many instances since where the juicy Sweetwater has been preferred to fleshy Muscats by skilful physicians for their patients, or, failing the Sweetwater, very juicy Hamburghs have been preferred to Grapes that were dead ripe, or to any other more firm-fleshed or leathery-skinned kinds, black or white. In the case of invalids, of course, it is Grape juice rather than flesh that is desired. Could the fault of shy or irregular setting be cured in the Buckland Sweetwater, no Grape would equal it for sparkling juice at once light and refreshing. The Cannon Hall Muscat Grape is so much less solid than the Muscat of Alexandria, that some have thought it has a dash of the Buckland Sweetwater in its constitution, and this is further confirmed by its capricious setting.—D. T. F.

VINES OUT OF DOORS.

I am glad I found Mr. Iggulden (page 233) referring to the merits of hardy Grape Vines for the clothing of buildings and walls, and the providing of homes with refreshing and profitable fruit. Of late years there has been a set made against the cultivation of the Grape Vine in the open air. Hundreds of Vines up and down have been sacrificed to a change of fashion, and have had to give place to huge Plums or inflated Pitmaston Duchess Pears.

Mr. Iggulden does well to start with a warning against strong shoots of young wood from 6 feet to 8 feet long in a single season. These may be allowable for furnishing high gable ends or other walls at the start, though even for this they are likely to give a wood-making tendency at the beginning rather than lead the Vines into fruitful ways from the first. But after the Vines are fairly established and have been pinched or pruned into fruit-bearing along their entire length, the less gross growth allowed the better. Mr. Iggulden, writing of the common Sweetwater or Royal Muscadine, recommends a distance of 3 feet between the bearing rods; this distance will seem extreme to most old-fashioned Grape growers. However, such extremes may be said to err, if at all, on the safe side. The greatest enemy of out of door Grapes has been overcrowding of branch, bunch and berry; the result has too often been to crush all three into a sort of entirety incompatible with profitable or creditable fruiting. Besides, the Royal Muscadine is one of the largest of hardy Grapes when well grown, and needs more room than the black and white Cluster, Miller's Burgundy, &c., which may be trained at one-third the distance between the bearing rods.

Of course, a good deal depends on the mode of pruning and training adopted. One of the best methods, as well as the oldest, is one or more leaders trained horizontally to the right and left, or the Vines may be planted as single, double, or multiple cordons at any desired distances, to

trained horizontally, vertically or diagonally. Anyhow, the fruiting branches should have sufficient space to utilise the sun and light of the locality to the utmost, and close pruning and severe thinning of shoots, bunches and berries are essential to the highest measure of success. I agree with most of what Mr. Iggulden says of the Black Hamburgh in the open air, and yet very creditable samples of it are often ripened in the open air.

Should the present hot weather last, some fine samples in bunch and berry will soon be ripe at Bury St. Edmunds. But the Esperione, Cambridge Botanic Garden and Trentham Black are hardier black Grapes of good size for the open air than the Black Hamburgh in the most favourable positions. The Black Sweetwater is about equal to the white, though not nearly so often met with. The Early Summer and Early Ascot Frontignans are among the finest flavoured Grapes out of doors and in. There are three more Frontignans—the White, the Black, the Grizzly—well worth growing in the open air. The whole of the Frontignans are of exquisite flavour. The chief weakness of Frontignans under glass is a tendency to shank or shrivel during the finishing stage, a failing they do not exhibit on warm walls in the open. The finest Grizzly Frontignans I have ever eaten—and the Grizzly well ripened is the king of them all for flavour—have been grown in the open air in East Anglia. D. T. F.

FRUIT PACKING AT THE CRYSTAL PALACE SHOW.

The classes devoted to fruit packed for market were far better filled than was the case in 1894, and, taken as a whole, the packing was a decided advance upon the exhibits of the previous year. Class 124, for a bushel of cooking Apples and half a bushel of dessert Apples, was the least satisfactory of the four. Of the three entries, the first prize lots were packed in oblong covered hampers, lined first with brown and then with blue paper in the case of the cooking Apples, and with corrugated and blue paper in the dessert fruit, the Apples being in three layers and packed in too expensive wood-wool. The second prize was awarded to very good Apples packed in heavy and rough boxes with the lids nailed down, the fruit being packed in thin shavings of varicoloured tissue paper, which gave an unpleasant effect. The third prize went to Apples packed in paper shavings in the ordinary round bushel and half-bushel baskets. No attempt was made to pack in light, non-returnable, wire-hinged boxes, which can be got in quantity at a surprisingly cheap rate now-a-days.

For class 125, the best packed basket of Grapes, there were seven entries, four of which were packed in cross-handled baskets, two in oblong baskets with covers, and the remaining consignment in an unwieldy and lengthy covered hamper. With the exception of the last entry all the Grapes arrived in excellent condition. The three prizes all went to the cross-handled baskets, there being little or nothing to choose between the first and second prize lots, which were very near perfection. The third prize basket was of too flimsy construction, and an unnecessary wad of packing material was placed along the bottom with the intention of keeping the bases of the bunches steady. The prize baskets had split Bamboos bent over the fruit on each side of the handle, thus effectually preserving the Grapes from injury. The two covered hampers were well packed, but the shape of the package offers an inducement to let it down on an end or corner, which is impossible in the case of the cross-handled basket, and its extra weight is also a disadvantage.

For boxes of Peaches, class 126, there were seven entries, the first prize being adjudged to fruit wrapped in white tissue paper, the tops being left exposed, and packed in rather coarse, but springy, wood-wool, the price quoted for which, however, seemed exorbitant, and would be doubtless much reduced on taking any quantity. The second prize went to a box in which the packing material was Moss, the individual fruits being wrapped three parts in blue and white tissue paper. The Moss had an unpleasing effect when compared with wood-wool, but one good box being disqualified for an informality in the manner of its arrival, and the third prize box, in which the packing material was best, "continental" wood-wool, containing a decayed fruit, the Moss-packed entry got into the prize list. In one elaborately got-up box each Peach was rolled in a strip of pink tissue paper and then in a long doubled strip of best white cotton-wool, trimmed level with the top of the fruit with scissors, over the whole several sheets of pink tissue paper folded, then a thick pad of the same cotton-wool. The effect was pretty, but it was considered altogether too expensive a method for profitable marketing. In one box the packing material was short grass. Curiously enough, in not a single case were paper shavings, the material advocated by Mr. Monro in his lecture on fruit-packing at the 1894 show, used.

In class 127, for a box of ripe Pears, there were eight entries, most of the boxes being tastefully packed. The first prize went to a box in which the same description of wood-wool that was employed in the packing of the first prize box of Peaches was used, the fruits being partially wrapped in white tissue paper. Second prize was awarded to a box packed with "continental" wood-wool, the Pears not being wrapped in paper. The third prize box had been carefully wrapped in brown paper; the hinged cover was also securely nailed down, the packing material used being the finest wood-wool, and each fruit partially wrapped in pink tissue paper. Of the remaining entries, two of the boxes were far too heavy, and two had covers nailed down. All but two in this class were packed with wood-wool, the two exceptions being packed with Moss.

The failures that last year's packing competition exhibited were this year conspicuously absent, the majority of the entries in classes 125, 126, 127 being well packed. The use of tissue paper for wrapping the fruit in is evidently on the increase, as is the employment of wood-wool as a packing material. It is well, however, to bear in mind that good judges are of opinion that the finest quality is apt, with pressure, to become too solid, and favour the coarser and more elastic kind, which is also the cheaper. The bad practice of nailing down the lids of the boxes is also apparently on the wane, only four out of the fifteen boxes being nailed down this year. S. W. F.

Apple Ribston Pippin.—Those who saw the splendid dishes of this variety at the Palace show will note that, in spite of the reports as to its failure to produce good crops in many parts of the country, it is even more popular now than ever. Doubtless much of the success with this variety is owing to more dwarf trees being grown. I have noted the importance of allowing a free growth, as I have seen trees that have been severely summer-pruned fail to crop freely. I find the best fruits are obtained from dwarf trees allowed to grow freely. Some old cordon trees given free play produce grand fruit and always bear. The fruits staged at the Palace were remarkable for size and colour, showing that a hot season is necessary to bring out to the full the good qualities of this old favourite.—S. H. B.

Coarse Pears.—Would it not be well to have a class for quality alone, not mere size? I noted at the recent great fruit show that nearly every collection contained Pitmaston Duchess. I admit it must be so. Judges do not go in for flavour or quality in these large collections; indeed I noticed some varieties only fit for stewing were given a prominent place. Most of the very large Pears are deficient in flavour, which should have first place. This is difficult, as everyone likes to grow large fruit. It is also necessary to show the public we can compete as regards size with foreign fruit. I do not find fault with those who grow large fruits, but ask the framers of schedules if it is not possible to have one or two classes for what may be termed the best flavoured fruits, size in such being a minor point. I may be told that at the old Palace fruit shows there was a class on one or two occasions for fruits noted for flavour, but if I remember aright, these were cut by the judges, and when the visitors went round the cut Pears presented a sorry spectacle. I do not advise this cutting. Most persons who judge these fruits would know the flavour, so cutting would be unnecessary unless of a new kind, and then one fruit could be cut. To give variety, why not have a class for new Pears introduced during the last few years, the prizes being awarded for flavour, good cropping, and other qualities?—W. S. M.

Apple St. Edmund.—This was shown at the Crystal Palace by Mr. Mackenzie, Linton Park, Maidstone, and, like so many of the splendid Apples in the exhibition from the same locality, was much admired. It is above medium size, in shape somewhat similar to a good Ribston and dotted with russet on the sunny side. This variety will become a great favourite if it crops well and is of good flavour. Of course in all soils it may not do so well as in the favoured Maidstone soil. With this variety Mr. Mackenzie secured the prize for the best dessert Apple of any variety not mentioned in the schedule.—G. W.

Pear Conference.—This is well worth adding to the list of good varieties, having several good points in its favour, the chief being its handsome appearance and good cropping qualities, the flavour also being equal to that of many of our midseason varieties. This Pear was certificated at the conference at Chiswick in 1885. I have never seen it crop better than it has done this season. Its shape is pyriform, skin a deep green with russet, though this season I have fine fruits quite free from russet. I never saw the fruits so clean and smooth. The tree is a robust grower, doing well on the Quince and Pear stocks. It comes into use at the end of October or early in November, and when grown on a wall I should advise a cool aspect if the fruits are wanted late in the autumn.—G. W.

Pear Le Lectier.—This new Pear is valuable on account of its good qualities, and, what is better, it comes in at a season good Pears are none too plentiful. I do not think it is much grown in this country. I first saw it at one of our leading fruit nurseries as an orchard house tree in pots. I have grown it as a cordon on a warm wall and am very pleased with it. The fruits are large, handsome, and very richly flavoured. The tree is a great bearer on the Quince stock. For walls it is excellent, and being a late fruit, in season from January to March, makes it doubly valuable.—G. W. S.

SENSATIONAL PEARS.

At the late fruit show held at the Crystal Palace there were numerous sensational exhibits, that is to say, many fine dishes of fruit altogether "out of the common." Especially was this the case in the class for Pear Pitmaston Duchess. In this instance several grand dishes had to be passed over by the judges, not because there were any flaws in them, but simply because the fruits were not big enough. The second and third prize dishes were remarkably fine and the Pears of good form, but not nearly so heavy as those which gained the first prize. It was one of those cases where the judges must either completely pass over a dish of fruit or else give it the first prize, and they decided in favour of weight rather than beauty of form. This sensational dish of Pears was grown by Mr. J. Gibson, Draycot Gardens, Chippenham. The five fruits weighed 8 lbs. 12½ oz., and the largest turned the scales at 31½ oz., being, therefore, only a fraction short of 2 lbs. in weight. Naturally there was something of the prize-pig appearance about them, but, all the same, they were worthy of special attention as showing what can be done in this country. The tree that produced them is growing against a south-west wall, is fan-shaped, and covers a space 28 feet by 12 feet. It is about twelve years old, and has not failed to

give few or many fruits for several seasons past; in fact, Mr. Gibson has repeatedly taken prizes at Bath, Bristol and elsewhere with fruit from this tree. It will perhaps occur to many of my readers that the crop must have been light, this accounting for the extra great weight of the fruit this season. Far from it; exactly 100 fruits were left to mature, very few of which weighed less than 20 oz. It was, therefore, a decidedly heavy crop. The soil at Draycot is shallow and rests on a gravel or hot subsoil. Such conditions are not favourable to the production of extra fine fruit. On the contrary, exceptionally high culture has to be resorted to, or otherwise starved or stunted trees and small fruit would be the order of the day. Liquid manure (notably sewage water) is very frequently applied both during the resting period and in a more freely diluted state during the growing season. An annual early spring mulching of pig manure is also given, this being preferred to horse, stable or other manures for the hot Draycot soil. W. I.

Early decay of fruit.—"W. S." asks (p. 234) whether fruit growers in other districts are troubled with Apples and Pears decaying and dropping prematurely. The Codlins and soft fleshed varieties generally are doing so with me more or less, but Pears, although ripening much too early, are not decaying on the trees except where injured by birds or wasps. "W. S." attributes this defect to the presence of over-much moisture, but such is not the cause of decay in my fruit, as it is a long time since rain fell here, all crops now suffering much from its absence. My opinion is that when the weather sets in so tropically hot after the season has so far advanced, the ripening process is too speedy, and therefore unnatural, and that any sudden change either to wet or cold, if only for a single night, will cause the fruit to rot. Weather which will encourage a gradual maturity is what we want in autumn.—J. C.

FLOWER GARDEN.

THE ADVENT OF AUTUMN.

HERE and there the trees are already changing colour. The leaves of an Horse Chestnut growing on a steep slope are showing tints of vermilion, while a little further on the southern side of an Elm is golden. The Virginian Creeper is slowly crimsoning. Narrow splashes of Violet on the high bank are all that is left of the glorious mantle of imperial purple that so lately robed it—the purple of Clematis Jackmani. The garden is so bright, that at the first glance it seems heresy to say that summer is dead, but, as one walks slowly and regretfully along the borders, the brilliant scarlet of the Zinnias, the Geraniums, and Begonias, the bright gold of Coreopsis and Rudbeckia cannot blind one to the loss of the Lilies, of which but one variety, Fortune's Tiger Lily, now over 6 feet high and blooming superbly, is left, or to the fact that the "month of the Roses," that "hastes and wastes," is by now full ten weeks past, though now and again, as if to console us for the departure of the main army, a few stragglers "greet us with a smile." Safrano, latest as earliest of all, is well in its second blooming, and will continue to dower us at intervals with its delicately tinted blossoms till Christmas, should the weather remain open. Rêve d'Or, Mme. Lambard, Viscountess Folkestone, Grace Darling, pale buds of the erstwhile almost scarlet Ma Capucine there are still to gather, whilst the old Monthly Roses, Laurette Messimy the most beautiful of all, hold bravely on, and a few Copp- Austrian Briers can be found to arrange with the chaste single white Macartney Rose with its faint ripe Pear perfume, which gives promise of blossoming for yet many a week to come. The Cape Hyacinths are things of the past, as are the Plume Poppies, the herbaceous Phloxes and Montbretias, whilst the vivid blue of Salvia patens has all but vanished, the less striking shades of Agathæa cœlestis, the blue Cornflower, and Plumbago Larpentæ but inefficiently compensating for its loss.

True, we have colour enough. Tropæolum Fireball has ascended a breadth of the house wall fully 10 feet high, mingling its scarlet with the white pendent clusters of Solanum jasminoides. Tall spikes of Lobelia cardinalis make high notes of colour among the browning Pæony leaves. The Coral Flower (Erythrina crista galli) lifts great spires of bloom above the Belladonna Lilies, and the dazzling hues of the Cactus Dahlias glow from their evergreen background; while from out the ruined lace of the Gypsophila a belated Oriental Poppy flames; but the first of the Michaelmas Daises—Goodbye Summer the cottagers call the flower—is in full bloom, and the plumes of the Pampas Grass are already bursting their sheaths.

The mid-day sun is hot, but summer is gone and the year is growing old. When one remembers it in the spring, with the opening of its first Narcissus, its carpeting of wild Hyacinths and wood Anemones, and its youthful song (voiced by the throstle) of the joy of life, one is tempted to revert to what Ruskin terms the "pathetic fallacy," and to pity it, despite the golden fruition of its dreams, the gold of the Sunflowers, of the ripe fruit, of the yellowing trees, the shaven stubble and the garnered grain—for autumn's song is sad beneath its store of gold; it has changed to a sigh (*tout casse—tout lasse—tout passe*).

In the afternoon, around the great Nut tree, from which for the last month the squirrels have industriously pilfered, a bat, dazed by the sun, flutters aimlessly, soon to seek its winter quarters under the beams of the old barn. The evening closes in apace, and the grass is drenched with dew; the air, heavy with the perfume of the sweet-scented Tobacco plant, grows chilly, and the doves roosting in the standard Magnolia are fawn-coloured balls of down.

As the night wears on one is tempted out by the clear harvest moon, and descends through a deep cutting, bordered on either side by a fringe of Ferns—Lady Fern and Hart's-tongue, Male Fern and Blechnum—towards the lakelet. On the further side a hanging wood rises aloft into the blue star-besprinkled sky, the trees a hazy mist of shimmering foliage in the moonbeams. Over the water hangs a diaphanous veil of filmy vapour; the great tree trunks in the foreground stand out, black silhouettes, the large flower-heads of the blue Hydrangeas looming dead white around their boles. The polished leaves of the Laurels below shine like molten silver; not a leaflet moves. Nature stands spellbound, entranced at her own loveliness, whilst afar, through the silence, the wood owls are calling—ever calling to the night.

S. W. F.

Campanula isophylla alba.—"R. D.'s" notes on this chaste and beautiful plant are interesting, and it may interest him to learn that when in Norwich a few weeks back I saw many plants of it in windows of small dwellings in the suburbs, and consider it has no rival for the purpose. In some instances it had been trained to a framework similar to Musk, but by far the best effect was produced where the pots were suspended in baskets or even separately, and the growth and flower allowed to fall down in the natural manner. This Campanula is one of the many simple, yet graceful subjects which might be used with good effect in large private gardens as well as in those of the poor.—J. C.

Layering Pinks.—In my younger days the layering of Pinks was seldom thought of, propagation by pipings being most popular. It is true great care is needed in layering, as the stems of Pinks are very small, and unless in the hands of an expert the knife is very liable to slip too far when the incision is being made. Yet many firms annually layer large quantities and find it answers well. Only the other day I saw a splendid lot of plants, the variety being Mrs. Sinkins, which had been layered from one-year-old plants as soon as the blooming season was past. Each plant had some half-dozen good strong growths as well as abundance of fibrous roots. The early date at which Pinks flower permits of the operation being performed by the middle of June, thus giving the plants ample time to form plenty of young roots by September. Yearling plants should always be chosen for layering, as it is next to useless troubling with old growths.—J. C.

FLOWER GARDEN NOTES.

FUCHSIAS.—These have done remarkably well outside this year, and together with Begonias have ranked among the best things in the flower garden, whether as big, old plants that do duty year after year, or as early spring-struck stuff grown along quickly and well hardened off before planting. The latter can be mixed with other things of similar height, whilst the larger plants may be employed as isolated specimens or for extra-sized beds. Of some few plants used in flower garden work it may be said that it is not easy to put them out of place, and this is, I think, true of Fuchsias, always provided they get a sufficient amount of room, whether large or small plants, to show them off to advantage; half their beauty is lost if other things are crowded up closely to them. Most of the free-flowering varieties are suitable for outdoor work, that is provided they are of good habit; they should not be straggling, but stocky and short-jointed, and when this habit is natural in pot culture it is always considerably strengthened out of doors. The sorts noted as flourishing in great beauty this year have been Duchess of Edinburgh, Rose of Castile, Mrs. Marshall, and Mme. Cornelissen, the last more inclined to be straggling, but of graceful habit and very free.

BEGONIAS.—Mr. Tallack (p. 247) is not alone in his experience of this insidious disease, and I noted it a few weeks ago under the heading of "Failures," but am sorry not to be able to offer any suggestion as to a cure or a preventive. It would seem out of doors to be due to atmospheric influences; at least an examination where the foliage is badly affected has failed to discover anything wrong either with the corm or the roots. I have had it both indoors and out since 1892, and I have nearly given up the culture of Begonias, only planting them in small quantities and in spots where they could be lifted in the event of the foliage going wrong and other plants substituted. One season, I think in 1893, the plants collapsed as suddenly and completely as the old yellow Calceolaria was wont to do when smitten with the disease to which it was liable. Strange to say, the few Begonias I have outside this year are quite free, there is no sign of a spot about them, the tuberous section and Worthiana being alike clean and healthy.

UNCOMMON PLANTS.—Following up the notes made a week or two ago on a few things that are not often seen in the flower garden, but which may be strongly recommended as very useful and of unique interest, I may mention one or two more equally good. The deep shade of blue of Salvia patens is somewhat akin to the colour met with in the flowers of the old trailer Maurandya Barclayana, and is almost unique in summer flowers. The plants flower with great profu-

sion and associate well with many things. They look, for instance, remarkably well with a good strain of Pentstemons, or thinly mixed with silvery Centaureas or Gnaphalium lanatum. Eucalyptus citriodora is not quite so silvery as the better-known E. globulus, but is a plant of graceful habit, throwing out the drooping side shoots very effectively, and, as the name implies, with very nicely scented foliage. It makes a pretty bed with Heliotropes or the taller-growing Ageratum. Raised from seed with E. globulus it will grow as quickly and with equal freedom. Nicotiana colossea is apt to get ragged and torn with rough winds and heavy rains, but in a season like the present it is one of the best fine-foliaged plants in cultivation for outdoor work, from the fact that, besides furnishing leaves of exceptional size, it is anybody's plant. It can be grown easily and quickly from seed. Seed was sown this year the last week in February and plenty of plants are 5 feet high with individual leaves 30 inches long by 16 inches in breadth. It is valuable for a large bed or as a background to flowering plants of dwarfer habit. I have not tried it as a pot plant, but should imagine, with plenty of room and good feeding, it would answer remarkably well and make a very effective plant for large conservatories, corridors, &c. A note should be made of the Coral tree (Erythrina crista galli) for grouping in some sheltered spot. A stock can be secured from seed, but this should be sown early with the Begonias and Centaurea. The plants once acquired can be lifted annually and stored away with Fuchsias and similar things.

Zinnias.—A variety known as robusta grandiflora has done remarkably well this year, and, given plenty of room, the plants develop into fine bushes 3 feet in height and 2 feet in diameter. Beds or groups of Zinnias have been used in the flower garden for many years, but the variety above-named is comparatively new. Of recent date, too, is the introduction of good types of Zinnias in mixed beds, and if the planting is well done the effect is very pleasing. It is gratifying to note the great improvement effected in mixed beds in the last year or two; indiscriminate huddling together of odds and ends is now seldom seen, the planting is carefully done, and, with a due regard to the judicious blending of colours, such beds rank amongst the best things in the flower garden.

Tufted Pansies.—Among the varieties referred to in one or two notes that have recently appeared is Duchess of Fife. I am anxious to know if it does well with the writers, as after trying it in one or two parts of the garden and under different conditions I am obliged to pronounce it a failure; the only variety in about a score that gets badly diseased and about half way through the season has to be taken up. The best substitute is White Duchess, a variety of good constitution and very free. Although the Tufted Pansies have furnished an abundance of flower right away through the season, I have had a similar experience to that chronicled in 1893, viz., that all the varieties other than selfs soon lost their true form, and after a long spell of drought, it was difficult to name the different sorts; indeed, if one took blooms from, say, Duchess of Fife, Blue Cloud, Lilias, Annie King, and others of this type and mixed them up, it was not only impossible to separate them, but in the majority of cases hard to distinguish them from an old white variety with a dark eye and slight petal markings. In formal bedding arrangements where the retention of colour is necessary, it is always advisable, having acquired good selfs in the different shades, to hold fast to them, reserving those of uncertain or mixed colours for places where a profusion of flower is all that one requires, and not that a special colour should be retained right through the season. I notice a correspondent in referring to Annie King says that it is a sport from Ardwell Gem. It is another proof of the eccentricity of this particular class of Tufted Pansies that when the changes of colour come, as the result of hot weather, this sort with me never approaches a yellow or even a primrose shade, but rather inclines towards the whites.

Starworts.—I should like to direct attention to the extremely useful properties of two or three varieties of Starworts now in flower where a quantity of cut bloom is required. These are vimineus var. Cassiope, ericoides, and Tradescanti. Not only are the flowers produced in great profusion, but in the case of the first and last-named the foliage is very small and the general habit of the plant light and graceful. I shall mark the clumps of these varieties, with the view to splitting them up at the proper time. It may be well to note that it is not advisable to split up all the stock the same season. Old-established clumps naturally flower more profusely than small pieces, and a few should therefore be preserved. A change in the weather (October 2) and slight indications of frost have necessitated a busy afternoon in housing plants in pots, in lifting tender things from the ground that are yet out, and in covering up with mats or stretches of tiffany anything that, being tender, cannot be as yet taken inside. Colder weather will be welcome from one standpoint, that of checking the luxuriant growth of Grass. It is seldom that so frequent mowing is necessary at this season of the year as has been the case in 1895. This and the accompanying edging of beds and verges are always a nuisance when one is specially busy with the ingathering of the fruit and root crops. E. Burrell.

Claremont.

LILIUM SPECIOSUM AND ITS VARIETIES.

If "H. P.," writing in The Garden, p. 247, on this subject, will turn to my papers in The Garden, vol. xl., p. 442, and vol. xlii., p. 471 (1891–92), he will find there the principal Japanese varieties in the speciosum group for the first time fully described. Pre-eminent he will find there the very beautiful and richly coloured form with white tips and edges now generally known as Melpomene. The form which he mentions as rubrum superbum is, I take it, the one which I there described as macranthum; it has very large flowers, beautifully coloured, borne on long slender pedicels, very symmetrical and broad-petalled. The variety which he mentions as "the latest of all" is described by me as cruentum (vol. xl., p. 472, and vol. xlii., p. 468), a very dark-coloured variety with short, erect, stiff foliage. Besides these there are two other distinct and good varieties—compactum, somewhat later in flowering than macranthum, with buds and flowers highly coloured externally; it has foliage dark green and erect, and is very free-flowering; and nanum, rather a late form, with drooping foliage and broad-petalled flowers of a soft rose shade.

In the roseum group there are two very fine varieties—formosum, early flowering, with a symmetrical, broad-petalled flower of a soft rose shade, and roseum superbum, mentioned by "H. P.," which is by far the finest of the roseum section. This form has a large symmetrical flower of great substance, beautifully rose-tinted; the foliage on a green stem is shaped much like that of Melpomene. Imported bulbs of this variety generally flower late, but if grown on a year or two come much earlier into bloom.

I have this summer had the pleasure of flowering for the first time Lilium Lowi and L. nepalense. Both these I think might be grown successfully in the warmer districts of Great Britain in the open air, but require to be lifted in the winter months and protected from cold rains and sharp frosts. L. Lowi is early in starting, grows rapidly, shows its bud almost from the first, and flowered here freely in July and August. Some bulbs threw as many as four graceful flowers on a stem. L. nepalense bloomed in September, and is still flowering; it starts a little later than L. Lowi, grows very rapidly, and is distinguished at once by its smooth, dark stem; whereas that of L. Lowi is light-coloured and pubescent. L. nepalense grows tall and will throw numerous flowers. I have heard of one plant 9 feet high with several blooms. Both these Lilies will, I think, prove great favourites. L. Lowi, from its purity of colour (white and rose ribbed outside, with numerous purple spots), is quite a lady's flower, while L. nepalense with its rich colour boldly arrests the admiration of the spectator.

Alexander Wallace, M.D.

3, *St. John's Terrace, Colchester.*

AUTUMN SNOWDROPS, CROCUSES AND MEADOW SAFFRONS.

It is interesting to observe from Herr Max Leichtlin's notes in The Garden of September 28 (p. 252) that he thinks Galanthus Olgæ Reginæ so much earlier than G. nivalis octobrensis. It is not, however, above the soil here to-day (October 2) and appears to be little in advance of octobrensis. I have examined both carefully, and find that there is at present little difference in the growth they have made. Both kinds are established bulbs and stood last winter without protection—a severe test. Brilliant weather for some weeks has been very favourable to the Croci and Colchicums, both lasting in flower longer than usual. Crocus pulchellus has been much admired, its delicate pearl-blue flowers prettily striped being exceedingly pleasing. C. iridiflorus has also been flowering well and is worthy of being more widely grown than it is. A clump of imported corms of C. pulchellus collected on the Bithynian Olympus a few years ago show considerable variation. This Crocus seeds freely here and seedlings are being raised annually. A collection of these autumn-flowering Croci is well worth the little trouble involved. I grow a good many species and derive much pleasure from their beauty. The Colchicums are less refined, but are also valuable, and considerable variety can be had. C. Sibthorpi is one of the finest of those with distinctly chequered flowers. It is large and of good form and is not so easily destroyed by strong winds and heavy rains. It has also the advantage of flowering considerably earlier than C. Parkinsoni, which does not appear to be happy in our northern climate and flowers both late and imperfectly. The double Meadow Saffrons are much admired by many of my garden visitors. The best of these is the double white variety of C. autumnale, but the others are also appreciated. The Meadow Saffron is well suited for growing in grass, and when planted in the border should be carpeted with some low-growing plant which would support the flowers, the greenery by which they are thus carpeted adding much to the effect. A clump of the double purple C. autumnale growing through the foliage of Crown Anemones, which always make autumn growth here, has been much admired.

Since writing the foregoing I observe in other parts of the garden two Snowdrops which were nearly an inch above the surface on October 4. These were obtained under the names of Galanthus corcyrensis and G. montanus. They are small and slender varieties, but hardy here. The original G. corcyrensis as first introduced flowered in December, but one cannot be very certain of the names of these autumn Snowdrops. S. Arnott.

Carsethorn, by Dumfries, N.B.

CALOCHORTUS VENUSTUS AND ITS VARIETIES.

These beautiful, but long-neglected bulbous plants have been brought prominently forward of late, and their frequent appearance at the R.H.S. meetings, together with the plates of several varieties that have been published in The Garden, will doubtless have aroused a desire among others to try their hand at growing them. Messrs. R. Wallace and Co. have proved in their nursery at Colchester—a district not more favoured than southern gardens — that Calochorti can be grown to perfection, and the charming groups of this flower that they have shown at the Drill Hall during the past two seasons will doubtless be fresh in the minds of many who saw them. They have also made several very fine additions to the Calochortus family, which now grows in number and importance every year. The variety here illustrated is one of the latest additions. It belongs to the C. venustus section, which is the finest of the family, and comprises some of the hardiest, freest blooming and most easily grown kinds. C. v. pictus was shown at the Drill Hall on June 24 this year, when it received an award of merit. The flowers are not quite so large as those of the ordinary C. venustus, but they are neatly shaped and of a purer white than those of any other variety of this section. The eye-like blotch on each petal is reddish brown, and there is a profusion of rosy spots at the base of the petals. It is a lovely form, sturdy in growth, and free blooming. The beginner in Calochortus culture could not do better than take this group, and, in addition to the variety just described, which though new is cheap, he should also grow C. v. oculatus, which is an exceedingly free-flowering kind with rose-purple buds and white flowers, of which the eye is black margined with yellow. C. v. citrinus is a gem, of a pale lemon-yellow beautifully blotched and pencilled. C. v. purpurascens is deep purple externally and useful for its lateness. C. v. roseus is one of the earliest in this group, and is easily distinguished by its triangular rosy blotch. C. v. Vesta is one of the most vigorous, and has an extra large flower which is creamy white, streaked and spotted with reddish brown and yellow at the base, whilst C. v. Vesta albus is its counterpart in size, vigour, and freedom, but its pure white flowers have no spot or blotch, only a slight yellow stain at the base.



Calochortus venustus pictus. Engraved for The Garden *from a drawing by Miss E. Carter.*

Those who begin with and flower these to perfection will certainly be fascinated with their quaint beauty. Success is not difficult to attain, and the details which lead up to it we need not now enumerate, as they will be found on p. 20 of The Garden for July 13 of this year.

Autumn-sown tuberous Begonias.—Many gardeners experience considerable difficulty in successfully raising these Begonias from seed in the early part of the year. To any such having a little heat at command during the winter I would suggest raising these things in the late summer or early autumn months. Some of the drawbacks to raising them in January and February are that by the time they are large enough to prick off a great deal of other work is pressing. Another thing, and also an important matter, is that the January-sown plants are usually too small in June to make any show till they have been some time planted. And again, in the waning of the year the duller days are more congenial to the safety of the young plants that in early spring frequently suffer from a sudden burst of hot sunshine or dryness. I may be told that the young plants will more readily damp off in the winter, but I do not believe this if they are kept away from drip and water given very sparingly at all times. A neighbouring gardener who plants freely and exhibits occasionally prefers autumn sowing, or rather, in his case, it is late summer sowing, as by the middle of September the young plants were ready for pricking off. In this way he obtains much larger plants for bedding, while the earliest are employed for pots. With a good assortment of kinds he selects and saves his own seed. When the pods are ripe he fills an ordinary pan with soil, and, taking the pod with finger and thumb, scatters the seed on the surface soil which has been previously well saturated with water. The pans are then placed in the dark, and if water is needed prior to the germination of the seeds, the pan is held in the water tank, but not allowing the water to reach the surface. These new seeds germinate very quickly and abundantly, several hundred seedlings appearing in a pan 8 inches across. Nor was it an isolated case, for the several pans I saw were just the same, simply one mass of the tiny leaves of the Begonias. In all there were thousands of plants in less than three weeks from the sowing.—E. J.

THE POISON OF PRIMULA OBCONICA AND P. JAPONICA.

On page 218 I observe an inquiry about this. Whether the pollen of P. obconica produces eczema of any kind I do not know, but handling the leaves in pulling the plants to pieces certainly produces an irritating eruption on the hands of some people, of whom my gardener is one. I have more than once tried passing the front of my wrist over the leaves without effect, but two or three weeks ago I had a different experience with the leaves of Primula japonica. Some unflowered seedlings had grown closely together on a soil heap, and had very luxuriant leaves a foot long. I was half-an-hour pulling them apart and packing them to send away. That night, so violent an irritation came on the palms of my hands and my wrists as to keep me awake nearly all night. The appearance produced was something like the rash of scarlatina. The irritation lasted for three or four days, and in nine or ten days my hands and the sides of my fingers peeled. I have not the slightest doubt that handling the large green leaves of the Primroses was the cause. I have been before told on good authority that this skin irritation was produced by other Primroses besides P. obconica.—C. Wolley-Dod, *Edge Hall, Malpas.*

—— A few years ago I had a plant of Primula obconica in which I took great interest. Finding the persistent way in which it flowered for at least nine months of the year and its value for decoration, I determined to grow it in quantity, and the following year I raised some six to eight dozen seedlings, which I attended to myself from the sowing to the final potting. Now during the month of March the period of transferring the seedlings into small pots, I had my first attack of a very irritable form of skin disease on my hands and face, which continued very frequently for over a year. During that time I spent some £20 on doctors' bills, &c., all to no purpose, as every

attack became more severe, until I read in The Garden columns a statement that the Primula was the cause of others suffering in the same way as I had done. I at once discontinued to touch the plant, and from that time I have been quite free from what the doctors called a very severe form of eczema. My first attack of the disease took place when removing the seedlings (that is, before any flower-spike was seen) into small pots; also, when I later on pinched off the flower-spikes before the flowers were open to strengthen the plant. I am quite certain it is the foliage and not the pollen that causes the irritation of the skin. I believe it is the hairy growth under the leaves and on the flower-spike that is the cause of all the mischief.—W. Hunter, *Baron Hill, Beaumaris.*

—— In the interest of all lovers of gardening, especially those amateurs who delight in growing an assortment of free-flowering plants for the window or sitting room, I gladly reply to Mr. Burrell (p. 218) concerning the above plant. In doing so I have no hesitation in saying at once that this decorative free-flowering plant is positively dangerous to many people. This fact cannot be too widely circulated, because, by reason of its freedom of flowering and also the never-failing succession of its spikes of blossom, the plant is now being extensively grown in all provincial towns. You can scarcely name a country market, large or small, where you will not find pot plants of it, a fact alone which is responsible for its appearance in so many cottage windows. In this way it is highly probable that scores may be suffering from its effects who never dream of the source from which the danger springs. The strange part of the business is that some people can handle it at all times with impunity, while others hardly dare to venture within touch of it. This fact has caused many to discredit its dangerous properties. But as one who has had between six and seven years of suffering directly traceable to this plant, I speak without hesitation, and if I had to choose between two plants, I would much rather handle a bunch of stinging nettles than touch the Primula above-named. It took me years to find out the cause of my suffering, and after spending much money with the doctors, all of whom had a different name for the disease, and gave me all sort of remedies. In my own case the itching, scarcely endurable at any time, always became intolerable at night, when the body was more uniformly heated. I adopted homely remedies and suggestions by the score, all to no purpose. Eventually, unable to longer endure it, I went to one of the London hospitals for skin diseases, and after undergoing an examination extending to some forty minutes, the disease still remained a puzzle to the seven doctors who had gathered around me, and who put to me questions without end. They could not reconcile the exceeding redness of the skin and the numerous watery pustules that were present on my hands, lips and other parts of my body with any known skin disease. In the end they prescribed an ointment to allay irritation, ordered me quinine in large doses, &c. The ointment certainly relieved the irritation, but was of course no cure. I think it is now nearly six years since I sent notes to the various horticultural journals respecting the poisoning caused by this plant. At the same time I mentioned I was in possession of an ointment that would allay the irritation for the time. The numerous applications I have received for the ointment form the best proof of the numbers who were then suffering from this plant. In my case the disease was infectious, but only to myself—that is to say, any part of my body touched by the affected part also became affected. And in this way my eyes, nose and lips were all affected because touched by the hands. It will interest Mr. Burrell to know that a variety of experiments, purposely conducted, proved conclusively that it is the numerous glands on the leaves and stems that contain the (to me) poisonous element; for after I had discovered the source of the trouble, as I thought, I was slow to proclaim it, because my little daughter (then three years old) and myself were the only persons affected by the plant out of a dozen or fourteen—hence the experiment, which left no doubt behind. After this I studiously avoided the plant and put it out of reach of the little one. It is now upwards of five years since I touched the plant, and I have been quite free from the disease; but had it been caused by the pollen, I could never have rid myself of the disease, because the wind may have carried the pollen in all directions, and some, at least, from the quantities of plants grown would have certainly found a resting-place on me. But it is not so; it must be contact with the glands, and the only cure to those who suffer is to let the plant severely alone. I believe a large number of American horticulturists suffer from this plant. It would be interesting to know if a microscopic examination of the glands of the leaves would throw any light on the subject. It is well that Mr. Burrell has directed attention to this subject, so that those who grow it may know how to act should any extreme irritation arise to those in touch with it. In my own immediate district I only know one other case, and this a foreman in a private garden, who, I believe, suffers from contact with the Chinese Primulas also, though not to the same extent.—E. H. Jenkins, *Hampton Hill, Middlesex.*

THE NATURAL DISTRIBUTION OF PLANTS.

I noted the other day in our pleasure-grounds an instance of self-distribution and propagation that in the more remote parts of the garden seemed akin to the natural increase of herbaceous plants already recorded. A regular colony of young Alders is coming up thickly on the margin of the lake, and it seemed at first difficult to imagine how they came here, no old tree being anywhere near. As a matter of fact, the seed had come from the other side, some 300 yards away. There is no sign of young growth in the neighbourhood of the old tree, and the inference is that a strong wind caught the seed and carried it clean across the water, depositing it at last on the margin on a bed of moist vegetable matter, where it quickly germinated. On sloping land the heavy storms of summer are always answerable for the distribution of plants. I shall look forward with considerable interest to another visit to a part of the Surrey hills between Dorking and Guildford, where early in the season was to be found on a small area a splendid variety of hardy plants. The spot in question is on the south slope of the hill, and is a portion of the down land that was apparently broken up with the view to continue it as arable land, but afterwards neglected. The slope is a sharp one, and I strongly suspect one will find another season that the seeds of many plants that had their origin on this piece of neglected land will have been carried down the entire length of the slope and founded a new colony at its base. On a smaller scale this carrying down of seed has been in evidence on one or two of our fruit tree alleys, where I have found small batches of Campanulas and Antirrhinums. They flourish on the broken coping in many places on our old walls, the seed drops, a heavy rain carries it along the alley, and it springs into life perhaps 30 yards or 40 yards from where it fell from the wall. Is the after distribution of Mistletoe on trees when a single piece is once established due solely to natural causes or the work of birds, and if the birds have nothing to do with it, can the appearance of the parasite on many branches be always attributed to the dropping of seed? Close observation of a Sugar Maple that is becoming thickly studded with the Mistletoe shows in many cases a solitary leaf with stem making its appearance, but there is not the slightest indication of any fissure in the bark in which the seed could have dropped, and besides this many twigs are showing under the branches where the deposit of seed in any way is practically impossible. It would almost indicate that the distribution of Mistletoe on a tree is almost identical with the spread of a plant of rambling tendencies in the ground, Couch Grass for example. The improvement in constitution of natural flowers by accidental distribution is in a country ramble quite as apparent as the fact of the distribution. The yellow Toadflax, for instance, makes its home on many a slope of the hills, and flourishes despite the shallow soil, but when it gets part of the way down the slope, where the surface soil, washed down by rains and lying perhaps a foot in depth through being arrested in its downward progress by some stones or a projecting spur of ground, is, the vigour of the plant and the size of the flowers are greatly improved and the flowering season is considerably lengthened. Take, again, the case of a quantity of the wild Violet growing, perhaps, on a bank in light, rather poor soil. A small piece is by some means transferred to a more shady bank where the soil is strong and somewhat heavy; the foliage is much stronger and healthier, the flowers are larger and decidedly of firmer texture; indeed, the whole character of the plant is changed. I take it that whilst the evidence of the reproduction and distribution of plants is interesting, the study of the improvement effected by altered, but at the same time natural, conditions and brought about by what may be called a natural manner is instructive as well as interesting.

Claremont. E. Burrell.

Erodium supracinereum is a diminutive rock plant with whitish blossoms distinctly veined with red. In general appearance the flowers of E. supracinereum have some resemblance to those of E. macradenium hybridum, but in point of foliage the plant is quite distinct from that kind. Instead of the delicate Fern-like foliage of E. macradenium, the leaves of the above plant are silvery white and rest closely upon the soil. For so small a plant it is free flowering, though not comparable with the other species in this respect. While interesting and distinct, this Spanish dainty certainly does not appear any too vigorous in constitution judging by a small plant of it in the Kew rock garden.—E. J.

Kniphofia modesta.—This is a very distinct and dwarf species with small spikes of closely-set whitish blossoms. The plant is from Natal, and, judging by the position accorded it at Kew, as may also be conceived by its native habitat, the species will not endure frost. One feels the appropriateness of its specific name when we remember the giants of the race, K. grandis, nobilis, and others, that tower far above one's head with their pyramids of scarlet and gold. The species above named may find a congenial home in the winter garden or cool conservatory. In such places its freedom of flowering and dwarf stature may be welcome, especially if associated with other things in the rock garden portion.—E. J.

SHORT NOTES.—FLOWER.

Polygonum vaccinifolium.—What a charming vase plant for autumn decoration this is Grown in a pot and allowed to extend itself as it likes, it is admirable for replacing other things that have done flowering. Its long wiry stems hanging round the sides are covered with the pretty pink spikes, which continuing until cut by frost are very effective.—J. M., *Charmouth, Dorset.*

Campanula Hendersoni. — This is a hybrid form of C. carpathica, the flowers mauve or pale blue, produced in rich pyramidal racemes, very handsome, and an excellent border variety. It can be increased by means of cuttings, root division, or seeds. Seedlings show some variation, as might be expected. I recently saw this fine plant in very effective form in an open, sunny position on a border, and doing well in ordinary garden soil.—R. D.

Quilled Asters for cutting.—These have several recommendations for this purpose their symmetrical shape, never large to ungainliness in a good strain, varied in colour, with long, stiff stems, lending themselves for association with other flowers. These are a few of the qualities which make this type so acceptable for decoration. They have not the stiffness of habit belonging to some of the types, and they are a conspicuous feature in the border.—R. D.

Stove and Greenhouse.

RHODODENDRON LADY ALICE FITZWILLIAM.

This is the result of a cross between R. Edgeworthi and R. Gibsoni, and is of a denser and more bushy habit than R. Edgeworthi. The flowers, pure white, sometimes marked on the outside of the tube with a faint streak of rosy pink, are borne in trusses of from three to five, each bloom measuring 4 inches across and in some cases 4½ inches. It is valuable in the conservatory as much for the delightful fragrance of the flowers as anything else, a few being sufficient to scent a large house. It does well in cold greenhouses and unheated frames, and may be described as half-hardy. By forcing it may be had in bloom at Christmas, but it is better to let it flower naturally in the spring. It sets its flower-buds very freely.



Rhododendron Lady Alice Fitzwilliam. From a photograph sent by Mr. E. Metcalf, Mill House, Halifax.

Carnations diseased.—I enclose you a few leaves of my Malmaison Carnation affected with a fungus. I have tried everything I can think of, but cannot succeed in growing them. Can you give me any advice through The Garden?—D. Fairweather.

*** Your Carnations are badly attacked with a fungus named Helminthosporium echinulatum, which differs materially from the more familiar Carnation spot (Uredo dianthi). It appears first as a small swelling, which bursts and distributes its spores all over the leaf in the form of minute brown dust. The leaves you sent are covered with these spores, which naturally spread to and affect other healthy leaves. This fungus vegetates between the membranes of the leaf—is, in fact, an internal disease that no outward application of remedies can affect. The only efficient way of dealing with the trouble is to pick off and burn every leaf that is seen to be affected and before the spores are distributed. Plants very badly attacked had better be burnt. All healthy growth should be persistently sponged with a weak solution of Gishurst compound. By patience and perseverance in these details only can you hope to bring the plants back into a healthy state of growth.—Ed.

Lilium nepalense. — This Lily seems during the present season to be more grown than heretofore, as it may be seen flowering in many places where treated as a greenhouse plant. It is certainly a very distinct Lily, and though the flowers are beautiful, it is not at all likely that it will become a popular Lily, as it often runs up tall and weak, and is after the first season not very amenable to cultivation. The additional numbers seen this year may, I think, be attributed to the fact that a few large importations came to this country in the spring, and one at least of considerably over 1000 bulbs was disposed of at the London auction rooms as mixed species from the Shan States of Upper Burmah. These seem, however, to be nearly all L. nepalense, at least as far as I have seen them in flower. There is a certain amount of variation to be found in the flowers of this Lily, as in some the chocolate at the basal half of the petals extends much further down than others, while the greenish yellow of the rest of the flower also varies in hue. L. nepalense must be regarded as one of the expensive Lilies, and as it is necessary to keep up the stock by continual importations, it is not likely to become particularly cheap, as in the case of those that are readily cultivated in this country or on the Continent.—H. P.

Bearded and spotted Begonias.—By same post I send you a box of cut flowers of new Begonias. The bearded Begonias have been obtained quite recently, and are to be offered to the trade next spring. Only five or six colours are bearded, but in a year or two all shades will be obtained. It is a start only, and probably in a short time we shall see other surprising novelties in this group. The spotted Begonia is a new strain, very promising. The aim is to obtain flowers spotted like those of a Gloxinia. It will not be sent out for a year or two. There is another wonderful novelty with large regular flowers, the petals of which are undulated and fimbriated. The flowers, of great substance and of the brightest colours, assume the shape of a gigantic Primula sinensis fimbriata.—D. Guiheneuf, *Paris.*

*** A very interesting series of flowers of good colours. About the centre of each petal is a curious Lichen-like growth of the same colour, or slightly different, giving the flower a very singular and sometimes beautiful effect. The spotted kinds, without these appendages, have large spots of white, clearly set in the body colour, sometimes irregular in size and running together.—Ed.

Winter-flowering Carnations.—In reply to Mr. Godfrey's criticism of my letter of a fortnight

ago in your issue of last week, I did not say, nor did I intend to infer, that the varieties I exhibited in November last at the Plymouth Chrysanthemum show were winter-flowering Carnations. Exactly the reverse. My letter was intended to point out to the amateur a way by which the period between the end of the flowering season of the border varieties and the commencement of those that are strictly winter-flowering kinds might be bridged over, and hence the constant succession of bloom be kept up. Moreover, my remarks were not intended for the professional florist or "up-to-date" grower (as Mr. Godfrey expresses it), but for the benefit of such persons as were not aware of the fact that a sort of second crop of blooms could be obtained in this way. If the American varieties are what Mr. Godfrey says they are, so much the worse for the Americans, for it is well known that Carnations are favourite flowers in America, and that they are grown in enormous quantities exclusively for winter blooming, and it was to see myself (and also allow my friends to do so) what they admired so much over there that I imported those to which I have referred. The nine varieties, the names of which I gave in my last letter, are included in the dozen which the chairman of the Society of American Florists gave as the best Carnations in America at the present time. I do not wish to go beyond that, as I have not as yet seen them bloom. I have seen photographs of them, and they certainly appeared to be very fine. The American plants, blooming as they have been specially prepared to do in the winter, could not come into competition with our English flowering varieties in any way, as there are no exhibitions at that time of year. The intention is simply that they shall add an additional charm to the conservatory and to the collection of the amateur in a class of Carnations of which we have at present far too few that are really good.—H. W. Weguelin, *Shaldon, Teignmouth, Devon.*

Fruit and Vegetable Crops.

IRELAND.

Vice-Regal Gardens, Dublin.—Fruit crops in our neighbourhood are fairly good, except Apples and Pears, which are light, the result of a sharp frost when in flower. All sorts of small fruit are heavy and good. Peaches and Apricots have set better than they have done for some years past. Plums on walls have also done better than usual. I cannot say that I have been successful in growing Plums as standard trees in our soil, which is heavy loam with clay bottom; they never ripened their crop in a satisfactory way, and after various schemes of root-pruning, transplanting, &c., were tried I cleared them off and planted Pears instead. Perhaps my want of success may be a hint to others in their choice of ground. Unfortunately, gardeners, as a rule, have very little choice in this respect. I am convinced, however, that with a good friable loam, a porous bottom, and moderate shelter, Plums as standards can be grown with every prospect of a paying crop. My experience leads me to prefer good old standard varieties such as Coe's Golden Drop, Denniston's Superb, Green Gage, Guthrie's Late, Jefferson, and Kirke's Seedling for flavour, and the following half dozen for cooking: Magnum Bonum, Pond's Seedling, Prince of Wales, Reine Claude de Bavay, Denyer's Victoria, and Washington. The severe winter through which we have passed seems to have done no harm to fruit trees, but vegetables and many varieties of evergreens reputed to be hardy suffered badly, not so much from the frost as rom the continuous north-east wind which prevai.ed throughout the winter and spring.

The long drought in May and June has left its mark on the supply of summer vegetables, especially Cauliflowers, which buttoned off wholesale. Some of my neighbours who grow them extensively had to plough them up. I have seldom experienced such difficulty in getting seeds to germinate, a considerable proportion remaining dormant in the ground until the July rains came, which have thrown the ordinary routine of cropping considerably out of gear. Green crops of all kinds are now doing well. Potatoes promise to be a heavy crop, the tubers large, but rather soft. At present a clear, dry autumn is greatly needed for maturing crops of all kinds.—G. Smith.

SUPPLEMENTARY.

The Gardens, Woolley Park.—I have had an abundance of fruit of every kind. Raspberries fine. Apples a very heavy crop, and also Pears. I have also Plums in abundance, the trees weighed down with fruit. This is not always the case, as we very often suffer from spring frosts. I had a similar crop about fifteen years ago. As a rule we only get thin crops, as the soil is rather too light for Plums. I consider the Plum worthy of more extensive cultivation. The kinds that do the best here for orchards are Purple Gage, Orleans, Washington, Magnum Bonum, Green Gage, Pond's Seedling, and Diamond; for walls, Early Favourite, Coe's Golden Drop, Kirke's, Early Rivers, and Victoria. I find Plums do the best where the soil is rather of a clayey nature.—Geo. Hudson.

Claydon Park, Winslow, Bucks. — The fruit crops in these gardens and neighbourhood are very good. Apples are a good average crop, fruit clean and promising well. Pears are a fair crop, the trees looking very healthy, especially where they were well watered during the dry season. Cherries and Plums are also good. Strawberries heavy crops and of good flavour. Currants, Gooseberries, and Raspberries are good crops.—J. Milsom.

The Gardens, Tring Park, Tring.—The fruit crops here, taking them all round, are the most satisfactory we have had for some years. Apples are an average crop, trees very healthy and fruit swelling rapidly. Pears a full average and very good. The same remark applies to Plums and Cherries. Bush fruits have been excellent and very clean. Strawberries were a good crop. Walnuts are thin, but Cobs and Filberts are exceptionally heavy.

The earliest Potatoes were under sized, quality good, and crop a full average one. Late kinds in fields and allotment gardens have improved very much since the rain, and promise, if not attacked by disease, to give good returns.—Ed. Hill.

Osterley Park, Isleworth.—The fruit crops in this immediate neighbourhood are exceptionally good, Apples and Pears being most abundant. Strawberries have been a heavy crop and good in quality, President and Sir Joseph Paxton being the best. Competitor bears well, the fruit of large size, but the flavour is decidedly bad. Raspberries have greatly improved since the rain. During July we registered 4·52 inches for the month. Plums good, such varieties as Prince of Wales and Victoria being heavily laden. Peaches without protection on walls are excellent, Grosse Mignonne, Dymond, and Royal George being the best. Hale's Early was gathered on July 28. Gooseberries and Currants an average crop. Walnuts are plentiful, Cobs below the average.

The severe winter we experienced proved disastrous to most of the green crops, but Cabbages pulled through remarkably well and came in early considering the season. Cauliflowers wintered in frames and planted out proved to be the best we have had so far this season. Peas suffered a great deal owing to the drought during May and June, as during these two months we only registered 0·88 parts of an inch, Sutton's May Queen (early) and Autocrat (late) being the best. The latter I consider one of the best Peas in cultivation, having grown it several years. It has a fine strong constitution, crops freely, and is of excellent flavour. Runner Beans are better than for several seasons past. Onions, autumn sown, have produced some fine bulbs, but spring sown are much smaller than usual. Green crops, such as Brussels Sprouts, Kale, Broccoli, look promising and are growing freely. Potatoes of the early varieties have not cropped so freely as usual owing to the drought, but the quality has been good. Late sorts are growing fast and promise a good crop.—Jas. Hawkes.

Powis Castle, Welshpool.—Fruit trees are looking remarkably well after the severe winter, and showing abundance of fruit blossom. A favourable time experienced during the expansion of blossoms resulted in immense crops of fruit of all kinds, excepting Pears and Apricots, the latter almost a total failure. Pears are thin and rather small. Apples good and a very heavy crop, all varieties bearing well and requiring a lot of thinning to ensure fine fruit. The dry spring no doubt caused the small size of Pears, but Apples do not seem to have suffered from the drought so much. Plums are an enormous crop, the branches requiring to be propped up to save them from breaking down. These, like Apples of all common varieties, will scarcely pay for the picking. Peaches and Nectarines here are nearly all grown outside and there is a remarkable crop this season. Tender old varieties like Royal George are this year a picture, and I never remember seeing them look better, trees neither blistering nor troubled in the least by fly. Cherries a heavy crop and good. All small fruits abundant and of good size, trees free of blight. Strawberry beds dressed with fine bone meal and given a good soaking of water, so that the drought in the early season did not affect them, resulted in very heavy crops, late varieties like Latest of All finishing up well. Nuts are abundant and good. Plums of almost all varieties do well here as standards.

A good season for vegetables of all kinds where attention was given through the drought. They, also Apples and all fruits in the neighbourhood of Montgomery, were riddled with pieces of ice in the thunderstorm at the end of the dry weather.—J. Lambert.

Wynyard Park, Stockton-on-Tees. — Taken all round, the fruit crops in this neighbourhood are very good. Apples are a capital crop and the majority of the fruits very fine and clean; our best are Ecklinville, Tower of Glamis (these two particularly fine), Stirling Castle, Lane's Prince Albert, Scarlet Pearmain, Keswick Codlin, Beauty of Kent, Cockle Pippin, Blenheim Orange, Bramley's Seedling. Cambusnethan, Stone's Seedling, Worcester Pearmain and Red Astrachan. Pears are quite an average crop and most of the fruits finer than usual. The best are Clapp's Favourite, a Pear that does exceedingly well in the north and is this year exceptionally fine in many parts of the county; Marie Louise, Fondante de Cuerne, Vineuse, Doyenné du Comice, another good Pear for the north; Beurré Diel, Flemish Beauty and Napoleon. Plums are enormous crops both on walls and standard trees. The best on walls are Kirke's, Jefferson, Washington and the several sorts of Green Gages. I may say here that all the better kinds of Plums require to be grown on walls in this part to succeed. Victorias on standards are simply magnificent crops, and Rivers' Early has been good. There are also fine crops of Magnum Bonum, though I much doubt this kind ripening up sufficiently for use; still, should we experience another fortnight of such weather as at present it will do wonders towards ripening all late fruits. Apricots have been an entire failure, the late frosts killing all the bloom. Morello Cherries have carried splendid crops of very fine fruit much above the average, but the sweet kinds do very little good outside in this part. All bush fruits have carried heavy crops and the fruit very fine. Raspberries were not so good as usual; the canes suffered severely from the very sharp frosts of February. Strawberries have been very good, certainly better than usual; as a rule, Strawberries do not do particularly well outside here, and we have to rely on a few sorts only for our crops. Those I have found do best here are Vicomtesse H. de Thury, La Grosse Sucrée, President, and from present experience I think very highly of

Royal Sovereign, Gunton Park and Lord Suffield, and think they will do well in this locality—at any rate, my experience of these three varieties outside this year is most favourable to them.—H. E. Gribble.

Saumarez Lodge, Guernsey.—This garden being on a gravelly subsoil has suffered very much from the dry season. Small fruit fair crop. Strawberries very poor and soon done. Apples and Pears almost a failure. Plums none; they will not do here on account of the dry situation and exposure to the east winds. The severe frost we had during the past winter has left many open spaces. I have grown the Bouvardia in the open border for years with in the winter only a slight protection of ashes. Habrothamnus Newelli and Mandevilla on the walls were killed. Dracænas and Myrtles are also dead. We in Guernsey are not prepared for such frosts. This season will be remembered as the red spider year among Grape Vines. I believe many of the roots that were near the surface in the outside borders were killed by the frost, and want of the winter rains gave the red spider a footing.

Vegetables of all kinds were almost at a stand-still until the rain came. Potatoes are a fair crop and of splendid quality; no disease.—W. Cameron.

Stoke Park, Slough.—Fruit crops this season have varied a good deal in this quarter. The trees of most kinds blossomed well, but owing to the excessive dryness at that time the blossom was soon over. In some cases a good crop of fruit set, and continued to look promising until the excessive drought in, when every sort of fruit tree seemed to stand still. Small fruits did not suffer so much from the drought, and consequently I had the finest crop of Strawberries that I have seen for years, the fruit being large, well flavoured and beautifully clean. The earliest on a south border was the old and well-known Keens' Seedling, from one-year-old plants, followed by Vicomtesse and Sir Joseph Paxton, the latter being the finest of all main crop varieties with me. Auguste Nicaise bore heavily, but the fruit was poor in flavour and did not colour well up to the tips; consequently it has been discarded, as well as some others, including Waterloo, which has been given up owing to its colour more than anything else. For preserving I grow the old Grove End Scarlet, the finest of all for this purpose, but, being small, one is inclined to grudge the time it takes to gather it when a large quantity of it is required. I plant it (as well as all Strawberries) on deeply-cultivated ground heavily manured, and retain the plants for two seasons only, and from a small plot the amount of fruit gathered is astonishing. Gooseberries were a splendid crop; the hot dry weather seemed to bring out the flavour in the large varieties more than usual. For some years I have grown a few of the largest varieties amongst the Apple trees in the orchard and gathered the fruit from these green for the kitchen, and have found it a great saving of labour. Black Currants bore heavily and the fruit was of first-rate quality. Red Currants only a middling crop and fruit smaller than usual. Being on a gravelly subsoil, the bushes were almost burnt up in some cases; a breadth recently planted in a deeper soil promised exceedingly well. Raspberries have been very fine, being about the only fruit I could afford time to water. It is surprising what effect a slight sprinkling of nitrate of soda given Raspberry canes just as the fruit commences to colour has; the fruit swells to a large size, and, as far as I can see, does not injure, but rather improves the flavour. After the much-longed-for rain came, Apples swelled up to a large size and will be the heaviest crop I have had for years, as the trees are breaking down under the weight of fruit. Stirling Castle, Lord Suffield, Ecklinville, Warner's King and, indeed, a number of varieties, are quite loaded with fruit of good size; while Blenheim Orange, Cox's Ribston Pippin and other favourite dessert varieties are loaded with fine fruit, and now at this date (September 2) colouring beautifully. Pears are a very light crop on pyramids and the fruit much smaller than usual, a circumstance partly accounted for owing to the enormous crops the trees produced last year and the drought this. On wall trees in most cases the crop is heavy and the fruit good. Plums the poorest we have had for years, Green Gage and Transparent Gage on walls being quite an exception, the crops being heavy and the fruit extra good both in size and flavour. Peaches on the open walls protected with a glass coping are very fine both in size and flavour; indeed, much too heavy, not having been thinned enough. The colour is all that could be desired. In some gardens near here earwigs have been a plague this season. On one old brick wall here that has been cemented over and wired, earwigs give very little trouble, whilst on another part of the same wall close by that has not been cemented earwigs are very destructive. My idea of growing Peaches outdoors would be to cement the wall and wire it, keeping the wires just far enough off the cement to allow tying the trees freely. A few years would repay the cost in the reduced labour compared with the old system of nailing, a system I have a decided objection to. All our trees are tied on this wall just before the blossoms open in spring, and with good raffia, which can now be purchased at very small cost, an active man soon gets over a tree. A wall so covered with cement is perhaps hotter in the middle of the day than a brick wall, but then I think it gives off, or at least does not absorb, moisture to the same extent a brick wall does. The wall here is 11 feet high and 55 yards long, the glass coping in squares 26 inches by 16 inches. At one time the glass was removed in the autumn after the fruit was gathered, and put up again before the trees blossomed in spring. The last four years the glass has remained permanent without any apparent difference to the trees, the result being a great saving in labour and expense, as taking down and putting up always meant some broken glass. From this wall I gather an enormous number of fine fruit, Crimson Galande, Stirling Castle, and Noblesse being fine, the last being more liable to mildew than the other sorts. Barrington planted two years ago promises well. Golden Eagle I planted some years ago, but found it too late in ripening to be of any use; besides the colour of the flesh was an objection. Apricots do not do well, and consequently are but little grown now. Cherries have been very fine, the trees having been well washed when the fruit was changing colour. Morellos I have never seen finer; this soil seems to suit the Cherry well both as standards in orchards and grown on walls where liberally treated. Mulberries are an immense crop and the fruit extra large. Filberts good. Quinces smaller than last season owing to the drought. The American Blackberries have been tried in several ways, but as yet without success, and in a garden not more than two miles from here they do very well and produce abundant crops of handsome fruit.

Early vegetables were good. Mid-season crops suffered much in the latter part of June and the first two weeks of July from the excessive heat and drought we experienced in this part. Since the rains came, crops have improved wonderfully, so that there are fine crops of most vegetables. Onions thinly sown and left unthinned are very fine, the bulbs not large, but very firm. Since adopting this system I have entirely got rid of maggot, and find the bulbs keep better during the winter. Carrots of the early type are treated in the same way. I had half an acre of Carrots sown in a field where the ground was in splendid condition at the time of sowing. The seed came up in patches; in some cases not a single plant appeared for 20 yards in a drill. Now every seed has come up and the plants are growing freely, clearly showing it was the want of moisture which prevented the seeds from germinating. Here we suffered more from the long-continued drought this season in the end of June and beginning of July than we did in 1893, making it a memorable season to many. Potatoes are an excellent crop and as yet free from disease, the last week or more of bright sunshine suiting the Potato crops well, and, indeed, all crops, the Apple trees being magnificent. With us the ground is very dry again. On August 30 and 31 the thermometer fell during the night to 34°.—David Kemp.

Hardwicke Grange, Shrewsbury.—I think we have to account for the very favourable fruit crop generally this year in many respects to the prolonged open autumn of last year. Up to Christmas we had open weather that helped to harden up the bloom-buds, which most assuredly were badly matured up to a late date through the want of sunshine during the latter part of summer and early autumn. Pears particularly were very short of buds. The crop of Pears, though under that of last year, is still a fair one. The Apple crop is good and clean and of large size. Plums are the finest I ever saw on standard trees. Nectarine Plum is one of the best varieties for standards and has been very fine. Gages a good crop on walls. Peaches with me are not a heavy crop, the buds having been killed by the two months' arctic weather we had at the beginning of the year. In other places I see the crop is fairly good. Of Apricots I can safely say there are none anywhere. The trees look healthy and much may be expected another year. Cherries of all sorts may be said to have been a good crop, the trees clean and fruit fine. Figs are mostly killed to the ground. I find Figs do best in paved yards against high buildings with south aspect. I have for the last twenty years had more or less good crops of the Brown Turkey variety. I may say no better situations than hard paved yards are to be found for Apricot trees. Filberts have been good. Strange to say, Walnuts are a very poor crop. Bush fruit has been good on the whole, Black Currants particularly clean and large. I find the old varieties are much the best; though not so large and sweet as some of the newer ones for preserving, they ripen all at once and we have done with them. Newer varieties are too late in ripening, and I find the same in regard to the Red Currants, the larger varieties die off so badly; no sooner has one a good plantation of them than one after the other the branches die off. Raspberries have done well. The Strawberry crop is excellent. I had a few, to me, new sorts a year or two since—Scarlet Queen, Crimson Queen, Competitor, Sensation, Empress of India, &c. The whole lot except the last-named is wanting in flavour and substance and other points that constitute a good Strawberry. They will all pass to the rubbish heap, and I shall keep to older and well-tried varieties. John Ruskin is my best early variety, being a few days later than the old Black Prince, which still leads by a few days. The very old Myatt's Eleanor maintains its character of being the very best late, and this gave me the finest crop I remember. Another old friend is Myatt's Eliza, not so late. This often goes under the name of Elton Pine, a very different Strawberry that I have not seen for thirty years or more. A friend of mine has had wonderful crops of this old Strawberry this year off eleven-year-old plantations.—J. Taylor.

Rose Garden.

HYBRID PERPETUAL ROSES FOR POTS.

Given well-ripened wood of these Roses, there is no time more suitable for potting them than the latter part of September. I have more than once taken this work in hand in the early part of the month just named, but it appears to have no advantage, but rather the reverse. For example, in a season like the present, with the exceeding great heat which we have experienced, the roots would very quickly dry up, and where this happens the Roses will be sure to feel it by and by; indeed, at no distant date many plants may die, and this by no means the fault of those purchasing the plants so much as those executing the order. Not that the nurseryman supplying the plants is to

blame, although his employés are the most guilty. Frequently when ordering dwarf Roses for potting up I distinctly state the purpose I require them for, and also make a special appeal that the roots be not subjected to any exposure either when being lifted or in the packing shed I have more than once further requested that the root end of the package be stood in the water tank, or the plants dipped in water. But in spite of many similar requests, the roots are often very dry when they come to hand. Whenever this happens I always soak the roots for half an hour in the water tank, and then heel the plants into some moist soil, and throw a wet mat or its equivalent over the shoots of the plants. In this way while lying in bulk any partly shrivelled wood may be more readily plumped up than could possibly be the case were the plants potted at once. The latter method would simply mean the greater exposure of the plants to drying influences just at the time when anything in this direction should be avoided. By soaking the roots and keeping the branches dark, any great mischief may be checked, and I think this method of plumping up the wood quickly has also the advantage of preventing undue saturation of the fresh soil in the pots just as the plants are potted. For instance, where the plants have suffered in transit and the wood has become somewhat shrivelled, the usual practice is to pot them at once and give a thorough soaking of water. And should the sun be powerful at the time or the wind of a drying nature, more water would be supplied to the roots and the syringe liberally used over the bushes. All this is very well in its way and helpful enough, but in the present state of the plants the roots cannot take up the moisture contained in the soil so readily, and the result is that it becomes unduly soddened. This, to say the least, is not giving the plant a fair start. And from experience I prefer, firstly, to plump up the wood and let the potting follow as soon as this ensues. Of course there should be no delay in potting them, inasmuch as the new roots will be waiting to push forth. Where such conveniences exist there is nothing to beat a deep pit into which to place these plants as soon as potted. In such places the first soaking of water given at the root will carry on the plants for some days, especially if lightly sprayed with water overhead daily and the frames darkened by mats. A week or so of such treatment as this is most beneficial in the quicker production of fresh roots. When this results, the lights and covering overhead may be dispensed with, unless it be a time of exceptional rain, when the lights may be placed over the plants, but admitting plenty of air.

A very great deal of the ultimate success or failure with freshly potted Roses of this class depends on the youthfulness of the stocks on which the plants are budded. Frequently old stocks that have been worked a second time without being replanted, while making fine bushes to look upon, are by no means the most desirable, certainly not the most successful. This is due in some degree, no doubt, to the increased number of the larger roots and the scarcity of the smaller fibrous roots, the latter much the more valuable for any purpose, more so when the plants are destined for pots. When potting up the plants, remove any damaged portions with a sharp knife and see that no buds exist on the stock. Where such have been, shave the eye level with the stock and so keep them in check. It is also a good plan with any feebly-rooted plants to nick the stem immediately below the ground line, in this way securing more roots and greater vigour of the plants themselves. As a general rule, if the plants are of fair size, a pot 9 inches deep will be the most useful; indeed, I am inclined to favour pots deeper and wider at the base than those usually obtainable. The ordinary 8-inch pots are much too tapering and afford insufficient room at the bottom, where a large proportion of the best roots is found. A good sized pot for ordinary culture should be 8 inches in diameter at top, 7 inches at bottom, and 9 inches deep, measured inside in each case. Such a pot would take the roots of ordinary plants without crowding them into a mass, and permit of the addition of more soil below the roots than is the case with the ordinary 8-inch pot as usually seen. E. J.

Rose Victor Hugo.—This has been the best dark Rose of the year. It has not only grown well and flowered freely, but the rich dark velvety colouring has stood the late burning weather without getting seriously faded. As a garden Rose, I am disposed to regard it as superior to Prince Camille de Rohan, which I have hitherto looked upon as the best dark Rose.—J. C. Clarke.

Rose Lady Helen Stewart.—I do not find this Rose any more subject to mildew than many others in the same line of colour. If it has one fault it is that it is not always a good grower. I do not believe it takes kindly to the Manetti stock, as I have seen it in several places looking anything but happy, and on its own roots with me it is a poor doer. Its highly perfumed flowers make up for some of its other shortcomings.—J. C. C.

Rose Dr. Grill.—The coloured illustration of this Rose in The Garden some time ago was, I think, instrumental in bringing to the front its merits as a pretty free-blooming variety. It was raised as far back as 1886 and is most useful for cutting, being really perpetual and developing lovely flowers early, as well as late, in the season. The colour is an attractive shade of coppery rose. Although it is not large enough for exhibition, this Rose should be one of the first selected for garden culture.—S.

Six really good Hybrid Teas.—It was not until the National Rose Society saw fit to formally recognise this class as distinct from the Teas and Hybrid Perpetuals that we heard disparaging remarks in connection with them. For some time it has been my opinion that this class has a great future before it, and although they were very poorly represented, once not at all, in the classes set apart for them at the N.C.S. exhibitions, last summer saw some creditable boxes, eight stands having been put up. Augustine Guinoisseau, La France, Captain Christy, Caroline Testout, Gustave Regis, and Viscountess Folkestone are half a dozen varieties thoroughly deserving culture in any collection of Roses. It would not be difficult to choose a second six, in which case I should take Bardou Job, Cheshunt Hybrid, Grace Darling, La Fraicheur, Lady Mary Fitzwilliam, and Marquis of Salisbury. Cheshunt Hybrid and Bardou Job are two excellent climbers, the semi-double of the latter being one of our brightest glowing crimsons. La France we all know, but, free as this old favourite is, its blush-white sport Augustine Guinoisseau is even more so. Caroline Testout and Viscountess Folkestone cannot be beaten by any Rose of their colours, whether we look for size, form, lasting qualities, perfume, or freedom in blooming. Most of the Hybrid Teas are simply grand for pot work, and I am sure that the new addition, Mrs. W. J. Grant, now returned to us from America under the name of Belle Siebrecht, will soon become one of the most popular of all. Very much of the opposition to these as a separate class arose from the fact that for many years La France and Captain Christy were placed with the H. Perpetuals, and also because the raiser of Gloire Lyonnaise sent it out as the first yellow H.P. This could only be as a trade advertisement, a yellow H.P. having a novel sound. The raiser admits it to be a cross between Baroness Rothschild and Mme. Falcot.—R.

Roses that do not droop.—For the first time during a somewhat lengthened experience I was recently asked to furnish the names of any Roses whose flowers do not droop. The majority of the H.P. Roses have a tendency to hang down their heads, and are therefore unsuitable for cutting. This was the reason assigned for making the request I have alluded to. Unless I am very much mistaken, the querist will not get a great amount of sympathy from readers generally if it is intended to imply, as I think it is, that a great proportion of the Roses we cultivate have this defect. If we were to grant this for a moment we should have to exclude quite two-thirds of the very best flowers, and our gardens would be all the poorer for encouraging such a taste, as there is only one type among the H.P.'s that has flower-stems rigid enough to support the bloom erect from the time it opens until it fades. The experienced reader will understand that I am alluding to such varieties as Baroness Rothschild and Merveille de Lyon. But really as regards any of the others, I do not see that there is serious cause for complaint. If there is any cause, it must arise from one of two reasons—indifferent cultivation or want of judgment in selecting the flowers of a suitable age for decoration. This short note may perhaps be the means of our hearing from readers whether there are any more who entertain the same opinion as my correspondent; if so, it would be of service if they would kindly give the names of any Roses they have found to have this defect. From information so furnished we may be able to compile a list of non-drooping varieties that would be useful to many readers.—J. C. Clarke, *Taunton.*

Garden Flora.

PLATE 1035.

SELF-COLOURED LATE TULIPS.

(with a coloured plate of, 1, T. bouton d'or; 2, T. picotee.*)

The genus Tulipa has naturally a very wide distribution, since, like the Narcissus, its various species or phases range from Britain and Southern Europe to N. Africa, Persia, the Caucasus, Turkestan, N. India, and Japan. The exquisite little yellow Wood Tulip (T. sylvestris) is possibly a native of a few localities in Norfolk and Suffolk, where it affects chalky and flinty places, but it is also easily and abundantly naturalised in woods, copses, and meadows elsewhere. It is now and then to be seen in the Christchurch meads at Oxford, though they are more famous for the chequered purple or white Fritillaries that nod and flutter amongst the fresh young Grass of April or early May.

In Europe there are the shapely little pink and white Lady Tulip of Clusius (T. Clusiana); T. Oculus solis, red as a soldier's coat, with a golden halo around a black disc or eye at the base of each of its petals. T. præcox, which some consider but a form of the last-named, is also found in S. Eastern Europe with one or two others, but the focus spot of all the more gorgeous kinds is in S.E. Europe and Central Asia. The splendid Tulipa Gesneriana is naturalised in fields and vineyards in one or two localities near Florence, but without a doubt the bulbs were originally introduced there, or more probably escaped from old gardens. The Tulip is, of all our garden flowers, a

* Drawn by H. G. Moon for The Garden at Graveteye Manor, Sussex, May 27, 1895. Lithographed and printed by Guillaume Severeyns.


T. PICOTEE

great and beautiful mystery in many ways. Its history is uncertain, and all the wild kinds change so much under garden culture, especially if propagated from seed, that they become scarcely recognisable as compared with their natural parents. Then their habit of altering their colours or "breaking" years after they are reared from seed is, so far, an unexplained mystery. So far as I know, there are no authentic hybrids between any two distinct species, but cross-bred varieties of both T. Gesneriana (late, or florist's Tulip) and of T. suaveolens (early Tulip) are abundant. T. macrospila is supposed to be a wild hybrid between T. Gesneriana and some other species.

All the seedling Tulips seem originally to have been raised in Flemish and Dutch gardens, and the first Eastern Tulips are said to have reached England from Vienna about 1578.



Late-flowering Tulips, forms of T. Gesneriana.

To Vienna, Tulip roots had been sent or brought by Ogier de Busbecq, the Flemish ambassador at Constantinople, about the year 1562. In his well-known "Turkish Letters" Busbecq wrote: "The Tulip has little or no smell; its recommendation is the variety and beauty of its colouring. The Turks are passionately fond of flowers, and, although somewhat parsimonious in other matters, do not hesitate to give several aspres for a choice blossom."

Of late years a strong appreciation has arisen for self-coloured late Tulips as opposed to the striped kinds, and one of the latest and most effective of all the late yellow kinds is Bouton d'Or or Buttercup, so faithfully shown by Mr. Moon in the coloured illustration. Its golden buds and blossoms are very strong and pure in colour, with jet-black anthers inside the cup-like perianth segments. So far as I know, the origin of this variety is unknown, but perhaps some of our Dutch friends—Krelage, De Graaff, or Van Tubergen—may enlighten us as to the early history of Bouton d'Or and of its dainty companion on the plate, which has come to us of late years under the name of Picotee. What Picotee really is I do not know, whether a white, rose-edged form of T. Didlieri, T. fulgens, or merely one of the ubiquitous phases of T. Gesneriana, or an especially late-blooming form of T. suaveolens. But it is quite sufficient to know that both the varieties here represented are good strong growers on all moderately light and warm soils. Bouton d'Or increases by offsets very rapidly, especially if the roots are taken up and cleaned in July ready for replanting in September. I have had large clumps of it in the Trinity College Botanic Gardens for ten or twelve years unmoved. These flower well and regularly every May-tide, and in half-shady places the latest blooms last well into June. How it came here I do not know, but it has been here considerably over a quarter of a century, along with T. sylvestris, T. Golden Eagle, and several very beautiful old forms of T. Gesneriana, including the rich old treacle-coloured kinds. Just now there is, as I have hinted above, a revival or renaissance in favour of the best of old late garden Tulips, and for such noble self-coloured species as T. Gesneriana, T. Gesneriana Strangwaysi, T. fulgens, T. retroflexa, T. macrospila, T. Golden Crown, T. Golden Eagle, T. Billietiana, T. vitellina, and a hundred and one self-coloured forms of the Flemish and old English garden Tulips that have been grown in England since the days of Elizabeth and Shakespeare, and in Belgium and Holland no doubt for at least a few years earlier. Gerard, Parkinson, old John Rea, and other early English gardeners all wax most enthusiastic over the Tulip—the flower of delight, or, as an old author says: "The Tulip is a queenly flower, and asketh a rich soil and the hand of a master."

To see broad beds, or even large clumps, of such brilliant kinds as T. Gesneriana, T. fulgens or T. macrospila amongst fresh young grass, and with a suitable hedge or other dark background, is to see a vivid picture of the finest and most satisfying of all colours. I once saw a few hundred bulbs of T. Gesneriana, the finest and latest crimson kind, flowering on a turf bank, backed by a hedge of Sweet Brier, Yew, Clematis montana and Quince bushes in full bloom, and the effect was almost indescribable. No other flower—not even Jacoby Geranium or the Pau Anemone—ever gives such a rich and intense bit of colour. To see any of the pure yellow or crimson Tulips in flower amongst greenery when the sunlight passes through their cups is one of the most satisfying delights you can have in a garden—not sweeter than milk-white Hawthorn, nor than old gnarled Apple trees in full bloom, but gloriously regal all the same.

There is another picture in the forest county of Sussex that I well remember in May, when a few hundred, or thousand may be, of the Wood Tulip jewels the young grass beneath an Oak tree on the fringe of a wood. Lovely as are its golden buds as seen in the grass, they are even more beautiful as cut by the handful and placed in fresh water to open their flowers indoors. Even the lemon-scented Mexican Cattleya is not more exquisite in soft colouring or more subtle in its dainty curvature of stalk and petal as thus seen in a vase quite near to the eye. Those who grow the best of hardy bulbous flowers need not envy the possessors of Orchid houses. Squill and Daffodil, Lily and Iris, Crocus, Snowdrop and Narcissus are all lovely flowers, but for royal pomp and splendour one must always have the best of self-coloured Tulips, both species and varieties, in quantity to flower in May. F. W. B.

The Week's Work.

KITCHEN GARDEN.

Planting Cauliflowers.—It is now high time that the first batch of Early London, Walcheren or Early Erfurt intended for supplying heads at the end of May were transplanted. Where handlights are still used a great advantage is gained, as there is no root-disturbance or check given by lifting in spring, and the plants can as easily be protected in sharp weather as in frames. If the ground was well trodden and the lights placed in position as advised a short time since, the soil should now be in a nice firm condition to receive the roots. Where the plants have been pricked out into beds, they may with care be lifted with a fair amount of soil adhering and should feel the check of removal but little. If rain has not fallen lately, give a gentle soaking with a rose the day previous to planting and choose a calm dull day for the operation. Avoid the common practice of laying out many plants at one time; rather repeat the journey, and lay out say half a row at once, otherwise the roots, which are very delicate, are apt to suffer. Most gardeners place five plants in each light, one at each of the four corners and one in the centre—a very good number, as then they can be reduced to three in the spring and allowance is made for loss by grubs or bolting. Plant firmly and sufficiently deep to prevent the plants swaying to and fro by autumn winds, this ruining many lots of plants in exposed gardens. Planting completed, give a gentle watering to settle the

soil round the roots, and if the weather is open and nights warm, leave the tops of the lights off for the present. Should, however, frost or rough weather set in, they will be better left on, arranging them crossways so as to admit a portion of air. If the plants have to be drawn from the seed bed, avoid the largest, choosing rather medium-sized ones with perfect centres. The next thing to be considered is the protection of a sufficient number of plants in frames or pits for transplanting for successional supplies in June. The smallest plants are the best for this purpose, provided they are sound and well rooted, as the shelter of the frame yard frequently induces Cauliflowers and Cabbages to grow too freely and become ungainly by March or April, especially should the winter be mild. Both in the handlights and frames a sharp look-out will be needed for the troublesome underground grub which eats the plants off just beneath the soil. Should the weather set in wet and slugs make their appearance, dust fortnightly with a mixture of lime and wood ashes. A little of this mixture sprinkled over the surface of the soil will act as a preventive to mildew and leaf-rotting. Any spare plants left in the seed-beds may be pricked out into rows in a sheltered nook or corner where they can easily be protected in sharp weather. In ordinary winters and on warm soil they will sometimes survive and be more useful for spring planting than frame-protected plants, should the latter grow too large.

Globe Artichokes.—Owing to the destruction by frost amongst the roots of this vegetable last winter, many were induced to sow seed in spring to raise a new stock. I advised that when transplanted they should be grown on a spare piece of ground, in order to prove their value before putting them into the permanent rows, as, generally speaking, a very large percentage of them is worthless. Select those worth retaining and plant at once on good rich land; give a good mulch of Bracken or dry oat straw, but by no means use decayed manure, as this only makes matters worse. On heavy soils it will be safest to wait until spring before planting these seedlings, mulching, as advised above, where the plants stand. Those who just saved their stock last spring will, if their soil is at all strong and retentive, do well to sever a number of the healthy young offsets some time during this month and pot them up into, say, 6-inch pots, giving them the shelter of a cool pit or deep frame, where a covering can be thrown over in sharp weather. These will increase in size and, if planted out in March, give finer heads (even if a little later in the season) than garden-established clumps. Some gardeners have abandoned mulching the old stools in the open, thinking that it made matters worse; but if light material is used, and this is removed in mid-winter and replaced with fresh, a wet mass round the collars is avoided. It is when decayed manure is used that mischief follows in periods of much wet and frost combined. Frost being already upon us, those who value the late heads had better throw a little canvas or some garden mats over the plants when frost threatens; a few rough stakes driven into the ground will support the mats. Liquid manure may still be given to plants that are at all weakly; on stiff soil, however, no more moisture should be given.

Mushroom house.—In a previous calendar I gave instructions concerning the preparation of an early bed, and this will ere now have been spawned and soiled. The house, hitherto warm enough without any artificial heat, will now need a gentle pipe warmth on cold nights to keep up a temperature of 55°. As soon, however, as it is seen that the spawn is in active operation, a fall to 50° may be allowed, this figure suiting the secondary and main crop beds better. Should the heat of the early bed show signs of falling, give a fair covering of dry oat straw, and, provided the material is fairly moist, do not water the bed until the young Mushrooms make their appearance. Manure from corn-fed horses should be collected each morning, for, as a rule, by the time sufficient has been procured and gently sweated it is time to make up another bed. Some people throw the droppings into a heap and allow them to remain unturned for some days in order to save time, but the practice is a bad one, as by such violent sweating much of the ammonia required for producing and nourishing the young Mushrooms is wasted in evaporation, neither do such beds last so long. Throwing it into a ridge and turning it every morning is by far the best plan, always letting that portion which was at the outside of the heap be worked into the centre next time. The long straw should be removed as the manure is gathered, but the short should be left in to assist in keeping it open, and thus encourage a freer working of the spawn. A very common mistake in Mushroom houses is to saturate the walls and floors every day with water. This creates a close, steamy atmosphere, which quickly turns the young Mushrooms black and hinders them from swelling. The best plan is to lightly syringe the paths and walls each morning, and no more. Insert the spawn when the heat of the bed has fallen to 90°, as if left till cooler, the disturbance of the surface and the opening and shutting of the doors often lower the temperature another 10°.

Forcing French Beans.—It may seem premature to speak of this work, but a batch sown now and brought forward in a moderate heat only will not be in a bearing state until the outdoor protected and cool frame-grown lots are past. I usually sow about this date, having relied principally on those good old varieties Osborn's Forcing and Sion House. Where the plants can be treated to plenty of light and air and a sturdy growth secured, 8 inch pots may be used for this sowing, but all succeeding batches should be grown in 6-inch pots and feeding resorted to. A few gardeners grow their Beans in shallow home-made boxes, and a capital plan it is if room can be found for them. It is astonishing in how little a quantity of soil Beans will thrive, and it does not become sour, as does a potful, if once over-watered. Very little water will be required until the Beans appear through the soil; indeed, rule-of-thumb watering must be avoided, or basal rot and death will quickly ensue. Sow enough seed to allow of thinning out the plants when an inch or so high, but do not upon any account top-dress with soil, as the idea that Beans emit surface roots is erroneous. In turning out old batches of forced Beans that have been top-dressed I never once yet found that any new roots had entered it. A house kept at 55° to 60° during hours of darkness will suit French Beans at this time of year, 60° being the minimum temperature a month hence. In preparing the pots see that plenty of drainage is placed in the bottom; the slovenly plan of one crock over the hole and a few leaves is not conducive to a free and healthy growth, especially in the depth of winter.

J. Crawford.

FRUIT HOUSES.

Peaches and Nectarines.—After the genial rains the fruit-grower will now be busy lifting and transplanting. Trees that have grown too strong and cast their buds or fruit will well repay for lifting. Trees, the leaves of which curl and mildew badly, may be cured by careful lifting, giving suitable drainage, and bringing the roots near the surface. Young trees growing grossly need the strong roots shortened back, and older trees inclined to grow coarse must have similar treatment. In lifting old or young trees it should be first ascertained if the roots are thoroughly moist; if at all dry, by removing a portion of the surface soil, making a basin, and well saturating the roots before lifting, there will be less danger of injury to surface roots. After the transplanting another good watering will cause new fibrous roots to form, and prevent flagging. In lifting always have plenty of room to work freely; open a trench 2 feet wide at least 3 feet from the tree, and throw back all soil taken out, well working the soil from the fibrous roots with a fork, and likewise getting well under the trees, cutting the strong coarse roots with a sharp knife. Endeavour to preserve a solid ball of earth and roots close to the stems; do the work as expeditiously as possible, and, should the weather be bright, give the trees a moistening overhead afterwards. Trees removed to a distance should have the roots and ball of earth well supported by mats, boards or a handbarrow, as by doing this work carefully there will be no loss of fruit next season.

Composts and drainage for trees.—It is important to have plenty of suitable compost for trees to be lifted and replanted. The Peach and Nectarine revel in an open compost which is readily warmed by the sun, and, of course, in tenacious soils drainage is an important factor. Great improvement may be made in wet soils by ample drainage and raised borders. On the other hand, in such seasons as we have just passed through I have found trees in a light flinty soil starving from the want of food and moisture, and have seen the necessity of having the Peach border slightly lower than the adjoining border to conserve the moisture. It often happens where a liberal mulch is given that the soil is in time so much raised that the trees do not get the full benefit of rains or watering; it is then necessary to remove a portion of the surface soil down to the roots, thus reducing the height. Replace the top or richest portion of the soil. If done as soon as the leaves have fallen it will benefit the trees, and sucker growth may be removed at the same time. It will be scarcely necessary to point out the evils of too much manure for the newly-lifted trees. Excess is the cause of strong root growth and much better wood is secured by using a suitable compost. In soils deficient of lime, chalk or old mortar rubble is invaluable to the formation of a hard, fruitful growth. In place of manures mixed in the soil, burnt garden refuse, wood ashes, and road scrapings are of great assistance in lightening a heavy wet soil, and where it can be obtained, good loam, which has been stacked for a little time, will be of great benefit to young trees. Food can always be given as a surface dressing at any season, and in no case (unless the soil is poor and much impoverished) should animal manure be placed under the roots. Drainage should be freely used in stiff heavy soils, using brick rubble and making a mound of the same before planting young trees. Cover the rubble with thick sods of freshly-cut turf, grass side downwards.

Apricots unfruitful.—Much that has been said of Peaches and Nectarines is applicable to Apricots. I like to lift Apricots before the leaves change colour, to retain the foliage as long as possible after lifting, and thus get new root action before severe weather sets in. Apricots which fail to make good wood and fruit freely will well repay attention, adding new material for the roots to work in. I have had trees which were valueless give very heavy crops in two seasons after being lifted. But my remarks must not be taken to infer that lifting will cure all evils. Still, in the case of unfruitful trees I would strongly advise more attention to the roots as early in October as possible in poor soils, giving food as advised for Peach trees with the addition of bone-meal to impoverished soil. The renovation, if undertaken in time, will often save the trees. In soil requiring drainage apply it freely, as Apricots delight in copious supplies of water.

Planting new trees.—The compost already advised, namely, good turfy loam, should be used freely for young Apricots, as by using suitable materials the trees make a good foundation and are then in better condition to resist disease. Early planting is also important with many stone fruits, especially in wet soils. Those who require the hardiest Apricots must rely upon such sorts as Large Early, a free grower; Hemskirk, a similar variety to Moorpark and the best of all, rather subject to canker, but a robust grower; Breda, small, but reliable; Large Red, somewhat after Large Early, and Powell's Late, a hardy late kind less subject to disease than many others. This is a small list, but I have found these varieties succeed when others have failed. In planting, firm the roots well, and afterwards give the sur-

face a light covering of short strawy litter, first watering thoroughly should the soil be dry.

Figs.—The crop on open walls has this season been very good where the trees escaped injury last winter, and now the fruit is cleared there should be no delay in preparing the trees for the winter, as I attach more importance to thorough ripening of the wood than to coddling or covering to preserve half matured wood. Much may be done now to expose the wood required for next season's fruit. All Figs visible or of any size are now useless. It is the embryo fruits at the points of the shoots which require light and air. All useless fruits should now be removed, also shoots and lateral growth which cannot be attached to the wall. Trees that were badly cut early in the year by frost if attended to as previously advised will have made good leaders. Keep these close in to the wall, removing any useless wood or late fruits, also any new sucker growth from the base.

Crowded old Fig trees.—These are often seen a mass of old, thick crowded wood with a scarcity of good fruiting wood. Two ways are now open to redress the evil, one now, another next spring. If these trees are root-pruned now and the best wood given wall shelter, a lot of the old wood may be taken out next April. In root-pruning old trees do not be too severe the first time, but allow a fair space from the wall. Give the roots left the new soil advised above with some bone-meal, using plenty of old mortar rubble, and ramming the new compost firmly.

G. Wythes.

Orchids.

ONCIDIUM AUROSUM.

I have a large plant of the above. I have had it for three years, and its former possessor had it for four years. During the seven years it has never flowered. It was in an 8-inch pot, but this spring I put it into a 12-inch one. It looks all right and the bulbs are nice and large. If you could tell me what to do with it I should be glad. I have been advised to break it up.—John C. McLean.

*** The cultivation of Oncidium aurosum presents no special difficulty—in fact, it is one of the easiest Orchids to grow. As you give no details of your cultivation I cannot say what is wrong in your case, but the treatment given below, if attended to, should enable you to both grow and flower it. O. aurosum is one of the larger-growing members of the genus, and one that produces long branching panicles of flowers, as many as fifty or sixty on a spike being by no means uncommon. Each blossom is about 1¼ inches across, the segments bright golden yellow, with a few reddish brown spots in the centre of the flower. Being a vigorous grower, it likes more pot-room than others in the genus, allowing about a couple of inches at least around the pseudo-bulbs. Good drainage must be given, this being well covered by a thin layer of rough Moss. Over this the compost may consist of equal parts of peat and Sphagnum Moss, and plenty of rough lumps of charcoal or potsherds must either be mixed with this or introduced as the work of repotting proceeds. The plants need not be set very high above the rim of the pots, but are better for being slightly elevated, as this ensures immunity from the effects of water collecting about the bases of the pseudo-bulbs. If the old roots on the pseudo-bulbs are plentiful and the compost before repotting was not in too bad condition, it is unwise to disturb them more than is avoidable, but if, on the other hand, the roots are found to be decayed with few live ones in a sour and close mass of half rotten peat, then they should be washed quite clear of this and only the best of them retained. In such a case it will also be best to use a smaller pot than has been advised for healthy plants. The compost being ready and the pots well cleaned and dry, bed this around the plants firmly, but not too close, laying the peat and Moss and the crocks in alternate layers and using a blunt-pointed dibber to fix it. The pots having been filled, trim off all ragged ends neatly and return the plants to the growing quarters. This should be in a temperature only a little, if any, above that of the Odontoglossum house, or say a structure kept as cool as possible by heavy shading in summer, the minimum winter temperature being about 50°. The lightest and most airy position should be given the plants, and after repotting they must be carefully watered at the roots until the latter are again well on the move, then increasing the supply by degrees as the new growths develop. If you wish to propagate the species, you may divide it as recommended, but this would certainly not predispose the plants to flowering. If the pseudo-bulbs on your plant are quite finished up, you had better reduce the supply of water at the roots for a time, but not sufficiently to cause the pseudo-bulbs to shrivel. This may have the effect of causing the plant to flower, but the species with me has never given any trouble in this respect. Endeavour to keep it quite at rest till the spring, only just enough water to keep the bulbs plump being needed; then when the growths start, grow it as quickly and strongly as possible, and most likely you will be favoured with flowers in abundance in the autumn. With all these tall-growing Oncidiums there should be a distinction made between the growing and resting periods, giving an abundant supply of fresh air, and for the species in question a cool house. By comparing this treatment with your own you may possibly see where you have gone wrong. The most frequent mistake made by amateurs and beginners is a too close atmosphere, especially during the growing season.—H. R.

Aerides affine.—This is a pretty little species and very free-flowering when well managed. The best position for it is in the Cattleya house, where the growth is more likely to be well ripened than if kept in the East India house. The erect spikes are very closely set with the pretty little pink and white blossoms, and are produced from the axils of the leaves near the top of the plant. Small baskets or shallow suspended pans may be used, and not too much Moss should be placed about the roots.

Epidendrum Wallisi.—This belongs to the section with upright distichous-leaved stems, growing about 2 feet high and producing terminal racemes of flowers. These are about an inch across, the sepals and petals yellow, with dots of crimson, the broad spreading lip white, with lines of a faint purple tinge. This species requires liberal treatment to obtain good results; it must be potted firmly in good peat and Sphagnum, and grown at the cool end of the Cattleya house. The plants never seem entirely at rest, and should be let have their own way in this respect. A liberal supply of water must be given all the year round, only a little less being needed during winter than in summer.

Oncidium Harrisonianum.—Where small, but brightly coloured flowers are appreciated, this pretty little species will probably find many admirers. It is a very old species, having flowered as far back as 1832 in the collection of the lady whose name it bears, yet it is not so common as many newer kinds. The pseudo-bulbs and leaves are small and grow in clusters, and the spikes are produced rather freely in autumn and sometimes again in spring. These attain a height of about a foot, the flowers being rather closely set upon them, plants with half-a dozen or more spikes being very attractive. Each flower is about half an inch in diameter, bright yellow, spotted with brownish-red. The pots used for this Oncidium must only be large enough to take the plants easily, as it is not a strong-rooting kind. Three parts of Sphagnum to one of peat will grow it well, and the drainage must be about two-thirds of the depth of the pot. It winters best at the cool end of the Cattleya house, but during summer it may be placed with the Odontoglossums. Plenty of water will be needed in the small pots advised above, so the compost must be frequently renewed, at least on the surface, or the requisite amount of air cannot reach the roots, a very important detail in the management of these small-growing kinds.

Masdevallia polysticta.—This species does not, I think, usually flower in autumn, but I recently saw a nice plant in full bloom. The blossoms are small, but plentifully produced, occurring on racemes of about five or six. The sepals are rosy white, profusely spotted with purple, and the flowers last a long while in good condition. It is a Peruvian Orchid, introduced in 1874, and is best grown in small pots or pans in a mixture of peat fibre and Sphagnum. The early spring is the best time to repot.—R.

PLEIONES.

With the flowering of Pleione lagenaria the season for these pretty Orchids commences, lasting from now until February or March, and serving to brighten up the cool house during late autumn and winter. In the structure of the flowers these Orchids closely resemble Cœlogyne, to which genus modern botanists ascribe them. They are, however, so different in habit of growth, manner of flowering and other details, that they will doubtless continue to be better known by the old name. The pseudo-bulbs of Pleiones usually last only one year, the old ones decaying as the new ones are being formed. They are all deciduous, producing the flowers along with the young growth. A distinct growing and resting season must be observed with these Orchids, and as they commence to grow at different seasons of the year, they require also to be repotted at different times. All of them are best attended to just as the flowers have faded. It is usual to repot the plants annually and to shake away all the old soil from about the roots, as with deciduous Calanthes. The best compost for them is two-thirds of nice fibrous yellow loam to one of peat, adding to this enough chopped Sphagnum and finely-broken crocks to make a light and elastic-feeling mixture that, while holding plenty of moisture, will soon run dry. Many growers are in the habit of filling large shallow pans with the bulbs, and in this way a good display can be made, though for many reasons smaller pots are preferable, and I never use any larger than 5-inch. By planting in this size it is easy to arrange the plants among small pots of Ferns, which hide the great defect of Pleiones, viz., the fact of their flowering upon the leafless pseudo-bulbs. Growing small seedling Ferns in the pans has also been tried, but, as far as I have seen, with no great advantage, these being usually kept too dry after the pseudo-bulbs of the Pleiones are finished and before the flowers appear, losing most of the fronds. Besides this, the roots of most Ferns appear to have a fining effect upon the Orchid compost, spoiling its open condition, and for this reason alone I never care to see them in Orchid pots or baskets. The plants having been shaken free of the old soil, the roots may be shortened back, but not all cut off, as they help to steady the bulbs in their new position. Care must be taken in repotting not to injure the young growths, and the base of the old pseudo-bulbs

may just rest on the top of the compost, which should be kept rather higher in the centre of the pot than round the rim, the flowers showing to greater advantage this way. If any new roots are being emitted before the plants are potted, even more care than before is necessary. The roots are really the most important point to be studied, and providing them with a suitable holding and careful watering are of even more consequence than the temperature. They must be placed in the Cattleya house for a time after potting, and extreme care is needed in watering, too much or too little being equally injurious. When, however, they are rooting freely a full supply may be given, and the plants will thrive in a cooler house. They all enjoy plenty of atmospheric moisture, and a light position is essential. As soon as the pseudo-bulbs are matured, lessen the water supply a little, giving less and less as the foliage turns colour and falls. Then when the flower-buds are seen to be again pushing increase the supply, as this will strengthen the plants and cause the flowers to be of better substance and colour, therefore lasting longer and making a better display. To propagate Pleiones the plants must be grown as vigorously as possible, attending carefully to every detail of their culture. Then a large percentage of the pseudo-bulbs will produce two new growths, the resultant pseudo-bulbs being afterwards potted separately. The species named below are among the best known and most useful kinds, and will make an interesting collection.

P. Hookeriana is a charming spring and early summer-flowering kind, requiring rather different treatment from the other kinds. It thrives best in shallow pans hung up close to the glass in the cool house. The manner of flowering is also different, the blossoms being produced along with the young growth and not preceding it. These are of a bright rose colour excepting the lip, which is white with a few reddish blotches near the base. This species was discovered by Sir J. Hooker in 1878 at great elevations in the Himalayas, where it grows on the mossy trunks of trees.

P. humilis is one of the most beautiful kinds in the genus, the lip being especially attractive. This is very large and spreading in front, where it is beautifully fringed. The colour is pale lilac or rose, striped with purplish crimson and suffused with yellow. The sepals and petals are in the type of the purest glistening white, but in the variety tricolor they are very light rose. A native of Northern India, introduced in 1850.

P. lagenaria is a large flowering and very effective kind, and one of the best known. Its blossoms are produced during the present and next month on one or two-flowered scapes. The sepals and petals are rosy lilac, the lip rather paler in ground colour, prettily marked with crimson and yellow. A native of the Himalayan Mountains, whence it was introduced in 1850. A very similar kind is

P. præcox, which is, however, usually deeper in colour, and its flowers are produced in winter. It is a widely distributed species in Northern India, growing at an elevation of 5000 feet or 6000 feet. A deeply-coloured and large-flowered form of this kind is P. præcox Wallichiana, which is sometimes classed as a distinct species.

P. maculata is another variable and beautiful kind, thriving well in an intermediate house. Its blossoms are about 4 inches across, pure white in ground colour, the lip being prettily spotted and blotched with crimson, and having several yellow ridges running lengthways from the column. Also a native of India, introduced in 1850. H.

Flowers of Egypt.—The oldest herbarium in the world is to be found in the Egyptologist Museum at Cairo. A few examples from Cairo may be seen at Kew. It consists of a large number of wreaths and garlands of flowers collected together from ancient Egyptian graves. These floral remains are practically all in a well-preserved condition. In most of the flowers those parts which have been protected by an outer covering are, in spite of their extreme delicacy, perfectly intact, while their colours have been preserved in a remarkable manner; it has even been found that some of the blossoms by immersion in water showed that they still retain possession of their colouring matter. All the flowers are such as grow to-day in Egyptian gardens, and were used as votive offerings, as we offer wreaths and Palm leaves to-day. The most interesting feature of these collections is their great age. Some of them were immured in sarcophagi so far back as 2500 B.C.

Railway station gardens.—A correspondent's notes on flower gardening at railway stations reminds me of the beauty of some of the station gardens on the Great Eastern line between Chelmsford and Norwich. Not only are they gay, but great taste is displayed in the arrangement of the beds and borders. I have often wondered how the station-masters manage to winter the Geraniums, as in nine cases out of ten the only glass accommodation they have is a two-light frame, often made by themselves. Yet after the severity of last January and February, there are the Geraniums as gay as ever. At a few places I noticed several tree trunk ends covered with their rustic bark utilised for Geraniums of larger size, while Petunias and Lobelias were hanging gracefully over the sides. Tropæolum canariense and the ordinary mixed Nasturtiums were trained on strings, so as to cover many an unsightly outhouse. Hops, Virginian Creeper, and Clematis Jackmani drape many a porchway, and in a few instances the sunny front of the station-master's house is adorned with Ampelopsis Veitchi in its autumn garment. It is strange that railway gardens in certain districts should be so gay and attractive, while in others they are dull, unattractive, and apparently neglected. —J. C.

Trees and Shrubs.

THE FLOWERING ASH.

(Fraxinus ornus.)

This is by no means a rarity, being a native of the south of Europe, and introduced as long ago as the early part of the last century. It is a small or medium-sized tree, in general character like the Ash, but less vigorous in growth. The principal distinctive character—from whence the name is derived—is the large open plume-like panicles of flowers, which are of a greenish white colour, very sweet scented, and borne in great profusion about the end of May. Like the common Ash, the European Ornus succeeds best in pretty good soil, and in a moderately moist rather than a very dry situation. When young it is of regular outline, and blooms so freely even when about 15 feet high that the plant is thickly studded and the scent is apparent for some distance around the tree during sunshine. The habit of the tree alters with age, as it then assumes a far more open character, like the common Ash.



Spikes of the Flowering Ash (Fraxinus ornus). From a photograph by Miss Armstrong, Monkstown, Dublin.

Medicago arborea.—This little shrub is now flowering freely at Kew, where there is a bush trained upon the outside wall of the cool division of the Orchid house. It is a native of Italy and allied to the Broom family. Its flowers are of a deep yellow colour, and borne profusely in crowded heads all along the shoots.

Kitchen Garden.

STORING POTATOES.

During the past two winters the severe frosts experienced have done immense damage to the Potatoes stored in sheds, pits or clamps in the fields and other places. In some cases the loss has been very serious, nearly the whole of the Potatoes having been more or less frosted and useless for sale or home use. In face of this loss, it may be useful to indicate how the present magnificent Potato crop can be protected. It is only in the best arranged gardens that proper root-sheds are provided, and those who are less fortunately situated are obliged to make the best use of the means at their disposal, utilising any spare or unoccupied sheds that are frequently far from frost-proof, or, failing such structures, the Potatoes are placed in the ordinary pit or clamp. Where sheds are available, they are much more suitable for storing the Potatoes than in the open for many reasons. Amongst these is the ease of sorting over in bad weather when it is unfit for the labourers to work outside, this timely removal of rotten or decaying tubers stopping further loss ; the Potatoes are also dry and can be taken out at any time without any inconvenience in either frosty or wet weather. In many country districts last winter there was practically a Potato famine, because they were in a band of iron, as it were, the soil over the "bury," as it is termed in this part, being almost impenetrable, and no one would open the "bury" lest the frost should enter and spoil the whole ; consequently prices ruled high until a change occurred. All this inconvenience is avoided in sheds, and even if these erections have thin walls and do not keep out much frost, the Potatoes can be made perfectly safe by a good lining of straw round the sides, underneath and over the top. I have kept Potatoes in excellent condition in such a shed, and which have compared very favourably late in the spring with those stored in clamps. Not only so, but they have been later in starting into growth. However, when there is a large quantity of Potatoes grown it is generally a case of "Hobson's choice," and they have to be put in clamps outside. After trying various sizes, I find a width of 4 feet at the bottom best, as the Potatoes generate less heat and keep much sounder than in wider heaps ; the length does not signify, as it may extend for hundreds of yards if necessary. The usual practice is to select a piece of land with a gentle slope, then dig out the soil about a foot deep and the proper width, shovelling out all the loose soil. Some growers put their Potatoes in at once and cover over with straw, but I prefer to have a layer of straw underneath and fill in then with the Potatoes, bringing them up to a pointed ridge, and then cover with a 6-inch layer of straw or Bracken, placing on that at least 6 inches of soil and beating it firmly. Before the soil is put on, a drain pipe fixed at the summit of the Potatoes at every 6 yards or 8 yards will be of service, by allowing any sweat to escape. These pipes will stand out through the soil, and a piece of straw stuck in will keep out a lot of wet, and allow the internal moisture to evaporate as well ; in a few weeks time a brick or piece of slate can be put over the orifice, as all sweating will then be over. It is always advisable to sort the Potatoes into eating and seed size before storing, and place them into different clamps, as it is easier and cheaper to do this as they are picked up from the land than it is later on. Another point is to so arrange the varieties that those which will keep longest will come last for use. Varieties like Windsor Castle, Cosmopolitan, or others of that class will be first-class until the new year comes in, or later, followed by Magnum Bonum and Bruce, the latter being, in my opinion, the finest and best flavoured late Potato grown, and I always place it so that it will come in for use or sale when all the other varieties are over. Many gardeners and others at this season will have plenty of hedge prunings, Briers and long Grass from banks, &c. Instead of burning this as rubbish, I would suggest carting it to the Potato clamps, and on the approach of sharp weather, covering the clamps with it. It is astonishing how much frost this covering will effectually exclude, not only from Potatoes, but also from Mangold or Turnip heaps.

W. G. C.

The protracted drought.—It is many years since vegetable crops suffered so much from want of moisture in autumn as this season. Save one downfall of about an hour's duration, no rain has fallen in this district for many weeks ; consequently all green crops are suffering much and Turnips in the open fields are much distressed. Brussels Sprouts present quite a blue appearance, having drawn every morsel of moisture from the ground. Of course, later planted quarters can still be watered artificially, but with forward plots which have met in the rows this is impossible, even if labour could be spared. Winter Spinach having its roots near the surface is feeling the effects of the drought perhaps more than anything, and I never remember having to water this crop in September before. Besides watering Coleworts, I have had to use soot freely over the foliage to disperse the colonies of insects which lack of atmospheric moisture has produced. If rain does not fall soon and in liberal quantities, the quality of winter vegetables in this district will be much affected.—J. C., *Newark.*

Lifting Potatoes.—The work of lifting and storing Potatoes that have grown to their full size is often unduly postponed, other matters requiring attention ; consequently autumn rains descend, and tubers, which while the soil was dry appeared free from disease, are found to be badly affected. In East Anglia early lifting of ripened tubers is as a rule practised, even though cleaning and general routine work have to be for the time neglected, the autumn rains in that part often being heavy and continuous. Not only is disease encouraged by a sudden transition of the tubers from drought to wetness, but a second growth also by which much of the nourishing properties of the Potato are drawn out. My contention is that the malady may exist in its embryo state and yet not develop to any appreciable extent unless fostered by some excessive change either in the state of the atmosphere or the soil.—J. C.

Mushroom culture in America. — Mr. W. H. P. Barley, of Detroit, is one of the most energetic Mushroom growers in the country, and he makes it pay. He assures us that he can make money, growing Mushrooms at a shilling a pound. Not only has he a large establishment a few miles from Detroit, but a year ago he started another on Long Island. His Long Island houses are 50 feet long, 12 feet wide, 7 feet high, with tiers of beds, one above the other. His Detroit houses are sunk 4 feet under ground level. Manure in New York costs more than it does at Detroit and other large cities, where the gardener buys it direct from the stable and hauls it home himself. In the east, buildings cost far more than in the west ; the price of timber in New York is much higher than in Michigan. His Detroit houses are built of Pine, but his Long Island ones are of Hemlock. Mr. Barley is the nephew of the late Mr. Pocock, of Mortlake, one of the best market gardeners of London. While Mr. Barley is building this new set of Mushroom houses on Long Island one of his sisters does the Detroit business. And he has another with him who knows more about growing Mushrooms than any other woman we have ever met.—*Gardening.*

DEEP CULTIVATION.

The present year has again plainly proved the inestimable value of deep and thorough cultivation, for where shallow digging has been practised the major portion of the kitchen garden crops has been a comparative failure. Owing to the very dry and hot weather, many crops have been of shorter duration than in more favourable seasons, even in the best managed and skilfully worked gardens. The Pea crop especially has been giving strong testimony of the benefits arising from deep cultivation, for though the straw has been somewhat shorter than usual, the crop, size of pod and general excellence in quality have been well maintained. Cauliflowers on deeply-worked soil have been all that could be desired and are still highly satisfactory, but on quarters that have been dug only one spit deep the result has been very bad, scarcely a decent head being fit to cut, and probably, owing to the stunted condition of the plants, caterpillars abounded to such a degree that the foliage was completely riddled, while the same variety sown at the same date was entirely free on deeply dug land. Onions, again, point out still more forcibly the wisdom and, I think I may safely say, the economy of deep cultivation. In the one case, large solid bulbs that will average 1 lb. each have been produced, and in the other small, badly-grown produce that is scarcely good enough for pickling. On the latter mildew appeared suddenly towards the end of July. This was stopped by spraying thoroughly with half an ounce of sulphide of potassium to each gallon of warm water. Both runner and dwarf Beans have been extremely productive on deeply-cultivated land, and other similar instances could be mentioned as to the great advantage of the system, showing that the extra labour and expense incurred are more than repaid.

The time for, and how, to double-dig or trench require more judgment and care than many would imagine, as soils and their working are so different. As a case in point I may mention that in a garden not far from here the soil is of a very strong tenacious character, and if this is trenched into ridges in the autumn or winter, it is practically unworkable in the spring, as it seems to set almost like bricks when thus exposed to the wet and changeable weather of winter, and the gardener has repeatedly assured me that after many trials he finds it much the best policy to do all trenching or digging only a week or two before the land is required for cropping. On other strong soils it would be almost impossible to get in early crops if the trenching was not done in the autumn or winter, working in at the same time strawy manure to act mechanically on the soil, rendering it more porous and friable. Where a mistake is sometimes made is in bringing the bottom spit of clayey soil to the surface, instead of digging or turning it over in the bottom of the trench, at the same time incorporating manure, vegetable refuse, or other waste material to assist the drainage, and also enrich the soil. If a portion of the garden is thus treated annually, in a few years the soil and subsoil will be vastly improved in character, and naturally the crops will be of a higher order of merit. On lighter soils I advocate bringing the bottom spit of the trench to the top and putting the top in the bottom, unless the former is of a most inferior nature ; in that case it would be a mistake to bring it to the surface. A good test of the fertility of this lower soil can be seen by noting how Lettuce and other crops answer when grown

on the ridges between Celery trenches. If these crops are a decided success, then it is plainly indicated that the bottom soil is well supplied with plant food, and that it will pay to bring it nearer the surface. I also believe many insect foes are destroyed by deep cultivation; the weather may possibly kill many, but I think birds effectually dispose of large quantities by searching over the newly-dug quarters in search of food. Another advantage of deep culture, according to my experience, is the absence of clubbing in the Cabbage tribe; neither on heavy nor light soil has this scourge put in an appearance with me, though I have been obliged on many occasions to put the same kind of crop on the quarters two or three times consecutively. In fact, the value of deeply-worked soil for all crops in either the vegetable or fruit garden is immense, and the labour necessary to perform the work ought not to be grudged. W. G. C.

CHRYSANTHEMUMS.

PROSPECTS OF THE SEASON.

IN the matter of suitable weather growers will have had little to complain of, and the exceptional amount of sunshine has had a satisfactory effect upon the growth of the popular autumn flower. Everywhere one may see bronzed foliage and firm, well-ripened wood which is certain to produce a crop of excellent blooms. The flowering period does not appear to be earlier than usual. It is reasonable to suppose that the phenomenal weather of September would have brought on the blossoms with a rush. Such, however, is not the case, and I feel certain that the cooler atmosphere of an ordinary autumn is more conducive to the buds swelling quickly than is unusual warmth. It is the nature of the Chrysanthemum to open its flowers without the aid of sunshine. Where the plants have had proper attention splendid results will, as already said, follow such a season, which has enabled growers who produce large blooms to be less early in selecting buds. The exhibitions should, therefore, bring flowers of high colour, if somewhat smaller, than in an ordinary year.

If the general character of the Chrysanthemum growth is so satisfactory, I hear of troubles with insect pests from many sources. Mildew is much in evidence, also aphides, but the most harmful foe is thrips. These tiny insects are so abundant in some quarters, that the flower-buds refuse to open at all. I have often noted the work of thrips about the month of August in attacking swelling buds, and make a practice of dusting a little tobacco powder on them before any harm is done. But the pest is so tiny, that it goes on with its destruction unobserved until it is too late to save the blossoms. Fumigating the plants when under glass is the best means of getting rid of the pest now. Last season there was a general outcry about a disease which ruined plants of the fine yellow Japanese Golden Wedding. Most persons discarded the variety at once. I did not like to do that, however, and this year on my few plants of the variety there is no sign of anything wrong. The hot summer may have helped me, but I shall certainly again grow what seems to me to be the finest yellow Chrysanthemum yet introduced. There is no lack of promising novelties this year, mostly of the Japanese type of flower. This class, however, is easily first favourite, and the introduction of which has done more than anything else to popularise the Chrysanthemum. The diversity of form and richness of colouring are marvellous; they are mostly of easy culture, too. Size, even to coarseness, has perhaps been too highly prized, but many think the maximum has been reached; the rage for enlarged show boards has ceased, and I fancy the popular taste will go for less bulky specimens. Grace and beauty of outline are often lost when the blossoms measure more than 5 inches or 6 inches in diameter. The light yellow Duchess of York should be abundant and fine. Pallanza, a deep golden yellow flower, seems likely to uphold the promise of its first blooms of last year. Mrs. C. E. Shea and Miss Rita Schroeter have excellent growth; the flowers of these two when first seen were remarkable for richness of colour and fine form. The sensational American sort, Philadelphia, is promising, although not over-strong in growth. Complaints reach me, too, that the opening buds are coloured. The idea is that the grand blooms which were sent last autumn from America were somewhat blanched by long travel, and hence the peculiarly rich ivory-white tint. We shall not, however, have long to wait before it can be proven whether the variety be a great gain among Chrysanthemums or not. I hope Directeur Tisserand will be seen in good form. This variety appeared to me the best from that noted raiser, M. Calvat. M. Chénon de Léché was also fine and of a new colour. M. Harman-Payne was also magnificent. This variety, however, is as yet very scarce, and we may not see it good until another year. Many of M. Calvat's flowers are too coarse, but as the raiser of Mlle. Thérèse Rey and Louise alone, that amateur has done enough to keep his name in the front for years to come. It appears strange to me that many exceedingly handsome Chrysanthemums after they come into general cultivation contract some undesirable habit. Thus Mme. C. Audiguier was lately seen with the petals reflexed instead of loosely incurving, which character, combined with its lovely mauve colour, gave it especial charm. The buds of Belle Paule with most growers went blind when they should swell. Viviand Morel has a tendency to produce flower-buds during the growing season at the expense of healthy foliage; and, last of all, I hear on all sides that growers have a difficulty in obtaining crown buds of Mlle. Thérèse Rey. I have myself seen many cases of blind buds on plants of this variety both this year and last. It will be a great pity if this habit becomes so bad as to prevent us growing so beautiful a flower. In the case of Viviand Morel I came across a capital plan in one collection recently. The grower (an amateur) cut his plants down to the base in June; strong sucker-like shoots were thus induced to spring from under the surface of the soil. Subsequent growth has been extremely rapid, and the plants now present clean, well-ripened stems crowned with most satisfactory flower-buds.

The character of the season, then, has been such an one as to lead us to expect a splendid period of blossoming. Later-formed buds, being less liable to decay by damping, will enable growers to cut blooms in large numbers, and we have, therefore, plenty of signs that this will be a most satisfactory Chrysanthemum year. H. S.

Late-flowering Chrysanthemums.—Such varieties as L. Canning, Peter the Great, W. H. Lincoln, Fair Maid of Guernsey, Source d'Or, and a few more distinct kinds that were planted out in the open in spring should now be lifted and transferred to pots or boxes in which they are to flower. By potting them up thus early the roots will have time to take to the new soil before the autumn frosts compel the early removal of the plants indoors. The present dry weather will necessitate the soil being thoroughly soaked about the plants. Stand the newly-potted plants in the shade for a day or two and syringe the leaves occasionally. The first-named is perhaps the finest white-flowering variety we have for cultivating in the manner named. The old roots or stools give the best results. By topping the shoots twice, the plants are now 2 feet high, and have increased the number of their stems so much, that from thirty to fifty blooms will be had from each plant, one on a stem. By disbudding as soon as the flower-buds are large enough to handle, the blooms afterwards are much finer than when all buds that form are allowed to develop.—E. M.

Prize Chrysanthemums in New Zealand.—Mr. Thos. Wells, the chairman of the Cambridge Chrysanthemum Society (N. Z.) and a great enthusiast in the cultivation of the golden flower, has recently, at the request of some colonial growers, prepared a list of the best thirty-six Japanese varieties for exhibitors in that colony. If I remember aright, I gave in THE GARDEN a month or two ago the names of the selected varieties, but a much more practical test may perhaps be found in the prize stand of forty-eight cut blooms which was staged at this society's last show. The varieties were as follows, viz.: Amos Perry, Bertha Flight, Beauty of Castlehill, Bryden jun., Col. W. B. Smith, Chas. Shrimpton, Coronet, Chas. Davis, Domination, Dr. H. A. Mandaville, E. G. Hill, Exquisite, Eda Prass, G. W. Childs, Grandiflorum, Geo. R. Gauze, Harry May, H. E. Widner, Ivory, Jennie Williams, Joey Hill, Jno. Shrimpton, Jas. Lynch, King's Daughter, Lady T. Lawrence, Lucrèce, Miles A. Wheeler, Mermaid, Mlle. Thérèse Rey, Mlle. M. Hoste, Miss D. Shea, Miss A. Hartshorn, M. Jefferson, Mr. A. H. Neve, Mr. H. Cannell, Mrs. E. D. Adams, Mrs. F. A. Spaulding, Mrs. Bruce Findlay, Niveum, Puritan, Stanstead White, Secrétaire Cassagneau, Sunflower, Truth, T. H. Brown, Viviand Morel, Waban, and White Louis Boehmer. It is wonderful how rapidly and successfully the Chrysanthemum is making headway in the colony, and also how keenly alert the colonial growers are to obtain all the newest and best varieties of European and American origin. —CHRYSANTH.

Dwarf Chrysanthemums.—The objection to tall Chrysanthemums at Woodham Hall, Woking, has induced the gardener, Mr. Seabrook, to adopt drastic measures in the matter of cutting down the plants, resulting in the shortest specimens I have seen. Judging, too, from the appearance of the swelling flower-buds, many of the blooms will not fall very short of the exhibition standard; they are thrown a considerable distance from the leaves in many cases, which is generally a sure indication of huge blossoms. The dwarfest plants of all are those of the yellow W. H. Lincoln, the flower-buds of which are not over a foot above the pot's rim. Wm. Seward, 18 inches high, is developing very fine buds. Avalanche is of similar height, and Mlle. Marie Hoste barely 2 feet from the pots. Mrs. C. Harman-Payne, Etoile de Lyon, Col. W. B. Smith, Edwin Molyneux, and Wm. Tricker are equally short, and Mons. W. Holmes is in full bloom about 18 inches high. Such dwarfness is somewhat out of the ordinary run for the varieties named, although it is possible to obtain short-growing sorts among more recently raised Chrysanthemums without having to follow any mode of cutting back. From Louise a magnificent blossom is obtained on plants less than 2 feet in height, and Souvenir de Petite Amie bears fine white blossoms on growths of a similar height. A. H. Fewkes, a promising yellow, is also very dwarf. Mme. Ad. Chatin, a fine white Japanese flower of incurving form, may be named as being among the shortest of growers. Later introduced kinds than the above-named are commendably dwarf in habit, and it is well to keep raisers of novelties in Chrysanthemums alive to the fact that these dwarf sorts are most appreciated generally. Mr. Seabrook's plan is to strike the cuttings at the usual time and to subsequently shift the young plants into small

pots and then into 5-inch ones. The third week in May all the plants are cut down within 3 inches or so of their base. They are then carefully watered for a time until fresh growth takes place, and are given the final shift into 8-inch and 9-inch pots at midsummer. It is evident the proper details have been carried out since. The plants one and all are exceptionally clean and healthy, the foliage being of a fine dark green hue.—H. S.

SHORT NOTES.—CHRYSANTHEMUMS.

Chrysanthemum Comtesse Foucher de Cariel is one of the best of early-flowering varieties in the open. The colour, orange-yellow with a bronzy suffusion, is very pleasing. The stocky habit of growth is most desirable for an outdoor variety, while its freedom in blooming is unsurpassed.—E. M.

Chrysanthemum La Marquise d'Aygues-vives.—This is a well-built, deep flower of the reflexed Japanese type. The colour when opening is a nice shade of salmon-red with gold points, but, unfortunately, before the flowers are fully expanded the tints lose their brightness, thus detracting from the merits of an otherwise handsome bloom. From late buds, however, the shades are rich and the bloom large enough for any purpose.—S.

Public Gardens.

GARDENING AT THE TOWER OF LONDON.

This historical focus-spot of old London deserves a visit, not only for the new Tower Bridge, but for many other reasons; to myself at present, however, it is the trees and flowers and vegetables within the precincts that deserve a few words. The Tower dates back from about 1078, or a few years after the Norman Conquest, and at present stands on about twenty-six acres of ground, eighteen of which, surmounted by the fatal mound known as Tower Hill, being included by the railings which surround the moat or ditch, and which is now dry and partly laid down in greensward, other portions being used as gardens to this day by some of the officials residing in the Tower.

The outer slope of bank of the old fosse on the side farthest from the river is now turfed over and planted with shady trees and gay tinted flowers, so forming a pleasant retreat for the neighbouring population, its due and proper management being guaranteed by the Metropolitan Public Garden Association. These public gardens at the Tower are, however, only an example of the many fresh green breathing-spaces now so pleasantly evident among the dust and din and bustle of one of the busiest cities in the world. London has always been a city of gardens, and its citizens still love the fresh greenness in their midst and the trees and flowers of its numerous open spaces. If you go to the basement of the museum at the Guildhall you can see the earthenware watering pots used by the city gardeners centuries ago, when the Strand ran through green gardens and open fields from Temple Bar to Westminster. Tourists flock to the great Place of St. Mark at Venice to see the pigeons, but the Londoner may see them any day in the garden of St. Paul's Cathedral, cooing and feeding on the cool greensward beneath Wren's noble masterpiece, in the nooks and crannies of which they breed. The Drapers' Gardens, with their Water Lilies and Mulberry trees, and those of the old Token House are things of the past; so, too, are the noble old gardens behind Northumberland House, with their Plane trees and Hawthorns, but for one garden swept away in the London of yesterday we have double the area in open spaces to-day. We have fresh and well-kept gardens along the Embankment, and scores of old graveyards are now fresh and green and thrown open to the denizens of the city lanes. There are all our noble squares from Kensington to King's Cross, and our London parks are wide and free, and the fountains yet sparkle in Temple Court and in the leafy cloisters at Westminster.

The open space around the Tower is peculiarly fresh and airy owing to its closeness to the broad and breezy river, and the trees and bountiful garden produce afford a good index of the freshness and purity of the atmosphere in its vicinity. In some parts the moat is turfed over, and forms a drill and camping-out ground for soldiers, other portions being devoted to vegetable culture, as I have said, with the best results. These little kitchen gardens are sheltered by the sloping walls, in places covered with Fig trees and scrambling Grape Vines, or with Ivy and Virginian Creepers, amongst which here and there gay window boxes full of flowers peep out very prettily. The tourist and sightseer wander listlessly up Tower Hill, through the jewel room and armoury, and pause again beneath the Plane trees on the little plot that has been red dyed with the life's blood of English queens. Then they go up into the prison chamber in the Beauchamp Tower, in the walls of which are "stones that speak" to us across the centuries, carved by fingers now in dust. Again you look at the paved spot under the Planes. Above stand the tall cupolas of the White Tower or Keep towering up against a fleecy sky, while down below in the old moat the gardens of herbs and blossoms lie basking in the sunshine of August, that is gilding the great disked Sunflowers of Peru, and adding a wine-red glow to the Virginian Vine, as it dangles in festoons from the grey stone walls. Gone are the days of ill-omened entrance by water through the wide-arched "Traitor's Gate," and instead we find trim gardens in its oldest water way. Each plot is sub-divided into brick-margined, rectangular beds for Mint and Thyme, Marjoram and Sage. Here are Leeks and Celery, and there Onions or Kale. Vegetable Marrows, on their rambling runners or vines, shine like golden orbs in the sunshine beside the ruddy-leaved Beet and feathery-leaved Carrots, while there are rows of Parsley as fresh and as crisp as are the daintiest tropical Ferns.

Cabbage and Parsnips, Rhubarb and Lovage, Broccoli, Cauliflowers, and Peas and Beans are here luxuriant in perhaps the self-same river mud, or rich soil, over which floated the youth and beauty of centuries ago. But you ought to go and see all this for yourself. Go early and see the Morning Glory in all its pride of royal blue, see the gold sheen of the Nasturtiums and Sunflowers, and here in the very heart of a great city you can inhale the fragrance of Stocks and Petunias and of Mignonette, Lavender and Golden Balm. That there has always been at least one garden within the precincts of the Tower goes without saying, for it is a mere matter of history that Raleigh, Thomas, the fourth Duke of Norfolk, and other noble prisoners were confined or "lodged," to put it euphemistically as of old, in the Garden Tower. The old gardens were adjacent to the Bloody Tower behind the western parapet, hence no doubt the ancient name of Garden Tower for this gateway. At the present time and for many years agone the site of the gardens has been partly built upon and partly converted into parade grounds, but visitors still may remember with interest that it was the place from which Sir Walter Raleigh looked down and conversed with passers-by in the outer world of freedom as they came and went by Thames' glittering side. In one old history or chronicle of the place we are told that the garden of the Tower was "fensed with lathes" and used by the keeper or lieutenant for the "growing of herbes." Even to-day half an hour in the prison chamber of the Beauchamp Tower is enough, and on hot autumn days one is glad to descend and breathe the fresh outer air. What it must have been in bygone times when doors were closely shut is past belief. How welcome any little incident or distraction to those weary ones who carved their devices and mottoes on the stones around them. How welcome the advent of the jailor's pretty daughter as she mounted the narrow stair with her little basket of nosegays and sweet herb posies, culled perhaps from the aforesaid governor's garden or from her father's tiny plot beside the gate. It was on the face of the old fosse wall that Sir Walter Raleigh and Essex saw the golden Wallflowers gleaming in the sun and fresh air of springtide, while above, they, pale and immured, languished at the loopholes.

In all England to-day there is not a bit of garden ground so fraught with saddest memory as is that of the Tower. Herein grew "the cluster of white Roses and their leaves greene" worn by the beautiful Anne Boleyn on May 19, 1535, when she laid her comely head on the gruesome block with her eyes unbandaged and bedewed with tears. Essex, Raleigh, Buckingham, the Dudleys, Seymours and the Howards, kings, queens and nobles alike have contributed to make this spot one of the most time-hallowed in our history. Every nook and cranny of this old fortress are haunted by love and beauty and by manly pride in distress and loneliness. When Longschamp, Bishop of Ely, built the extensions to the older Tower, we read that he confiscated surrounding land, as Geoffrey of Essex had previously done when he wanted to make a vineyard, and in another place we find it stated that the slopes of East Smithfield nearest the Tower were known as "the gardens" until the time of Queen Elizabeth. In those days the Tower of London was a flowery place redolent with Lavender, Rosemary, Lad's Love and Thyme, but it is even more interesting to us to-day as a lion taking its rest with the Fig tree and the Vine luxuriant on its outer walls.

F. W. Burbidge.

DUTHIE PARK, ABERDEEN.

This is the most important of the Aberdeen parks. It is unfortunately at some distance from the city itself, but is prettily situated, the ground sloping gradually to the side of the river Dee, thus affording better scope for good gardening than if on a level. Mid-September is not the best season to visit gardens or parks, especially after heavy rains such as have occurred of late. We made note, however, of several interesting features, and one was the good use made of the more compact annuals for edging. They gave splendid bits of colour to shrubberies, in which, as in the English parks, one saw much the same muddled-up arrangement—Laurels thrusting themselves against flowering things, as the beautiful Spiræa ariæfolia, which is very fine here.

Amongst the marginal plants we noticed Gazania splendens, Silene, Papaver Rhæas, the Field Poppy in variety (also called Shirley Poppies), the rich brown and crimson Linaria reticulata aurea purpurea, annual Chrysanthemums, Coreopsis, Godetias (white and rose), Platystemon californicum, Nemophila, one variety of the Corn Marigold, Chrysanthemum segetum grandiflorum, and the lovely Clarkia integripetala alba, which is one of the most beautiful of all white-flowered

annuals, especially as used in this park. Eucharidium grandiflorum and Gaillardias were flowering gaily. At the main entrance to the park are several beds of Roses, each variety massed together and freely planted with Gladiolus brenchleyensis. This gives a welcome glow of scarlet colouring. The principal Rose is Gloire de Dijon, which does better in Scotland even than in the south, the cottages and larger houses often being covered with the fragrant flowers. Amongst other Roses in bloom at the time of our visit was La France, but the time of the majority of Roses was over. We saw no Tea-scented varieties, such as charm one in southern gardens.

Against the bridge near the lake we noticed two of the finest banks of Cotoneaster microphylla we have seen, a dense mass of growth, enlivened with crimson berries. There is no water gardening. The stone edging to the water is as bare as a gravel path, but this is no worse than in London and other English parks.

The rockwork here is far better than one often sees in the south. There are more plants than stones, which are hidden with the growth of masses of hardy Ferns, Megaseas, and other things.

Amongst other features, very fine were the beds of single Begonias, the flowers exceptionally large and rich in colour, and held well up above the dense compact leafage. Two beds of a splendid scarlet variety against dark blue Lobelia were remarkably rich. Near to the bold Begonia beds by the Dee side were those of China Asters in full bloom, but heavy rains dash these about, whilst the Begonias seem unharmed by dripping skies. Dahlias of many kinds, early Chrysanthemums, Hollyhocks, and Sweet Peas, which are more popular even than in the south, gave bright breaks of colour to the masses of shrubs, some, the hardy Azaleas in particular, already assuming the tints of autumn.

Victoria Park.

This is a smaller open space than Duthie Park and placed more in the city, where of course it is more appreciated. It is laid out in a pleasing way. There is an absence of meaningless walks, which split up and spoil Grass swards. A good attempt is made at getting bold masses of various plants, but sometimes the result is not always happy, especially in the confused jumble near the fountain. We were pleased to see good use made of the Snapdragon (Antirrhinum), two beds being planted with well-coloured flowers, and the white herbaceous Phlox was also very handsome. This is a splendid hardy plant for a good group, and flowers, when by a proper selection of things the garden can be gay as in the summer months. We should like to see the white and other decidedly coloured varieties planted well to get rich effects. We were surprised not to see such splendid autumn flowers as the Tiger Lily and L lancifolium (L. speciosum) more freely planted. They are so free in growth and bloom, that it would be worth while getting masses of them to colour the garden in September.

Public park for Bath. — At a meeting of the Bath City Council lately the Mayor announced the gift of Henrietta Park to the city from Captain Forester, who inherited the Bathwick Estate from the late Duke of Cleveland. The park, which was formerly a private one belonging to the estate, is situated in the centre of the city, and will probably be laid out by the Council as a public pleasure ground. A resolution was passed gratefully acknowledging the gift.

Connaught Park, Dover, is very well worth visiting. The borders of Petunias are finer than I ever saw before. The soil evidently suits them, and there is a very great variety of colour. The upper border has annuals and herbaceous plants mixed, and is very gay. There is a long pond full of gold and silver fish, some Water Lilies and other plants. It is in a very warm situation. Aponogeton distachyon ought to thrive splendidly. M. Latour-Marliac's Water Lilies ought to be in the pond.—George F. Wilson.

Open spaces.—At the monthly meeting of the Metropolitan Public Gardens Association, 83, Lancaster Gate, lately, Lord Teynham, vice-chairman, presiding, it was announced that an open space in Quadrant Street, Canning Town, had been laid out and opened by the association; that seats had been placed in North End Road, Fulham, Goldhawk Road, Hammersmith, recreation grounds in Twickenham and East Ham, Dulwich High Street, and a space by the Old Street Tabernacle; that a letter had been written to the council of the United Synagogue respecting the condition of some of the Jewish disused burial grounds, and that the West Ham Corporation had agreed to plant additional trees in Freemason's Road. Communications were read respecting the proposed laying out of Marian Square, and the churchyards of St. James's, Piccadilly, St. James's, Pentonville, St. Matthew's, Bethnal Green, St. John's, Westminster, and Christ Church, Blackfriars Road; and it was agreed to continue negotiations respecting some lammas land at Tottenham, the Copperas, Bromley, the vacant site in East Street, Walworth, and other spaces; and to secure a site for a recreation ground in Deptford. A grant of £10 was made for a gymnasium in Southwark, and for six seats for Bloomfield Road, Paddington. Amongst the matters considered at the meeting were the preservation of Ham Common and Churchyard, Bottom Wood, Highgate; the improvement of a small plot of land in Plumstead, the opening of Albion Square, and the burial grounds in Long Lane, Southwark.

Societies and Exhibitions.

NATIONAL CHRYSANTHEMUM SOCIETY.

October 8, 9, 10.

The October show of this society, which has now become a more important fixture than heretofore, was held on Tuesday and the two following days. It was the prettiest show, we think, ever held at this season of the year in the Royal Aquarium. Greater taste was shown in the arrangements and the competition was keen in every class. One can scarcely tell at a glance what month we are in if we judge by Chrysanthemum blooms. Those shown on this occasion were quite as large as those seen in November. This is not an advantage, but it shows how busy raisers have been in acquiring fulness and size in their interesting productions.

The great class was for twenty-four blooms of Japanese varieties, and the prize was won by Mr. W. Wells, Earlswood Nurseries, Redhill. He had a splendid stand of flowers, conspicuous amongst the varieties being Eda Prass, Louise, Thomas Wilkins, Boule d'Or, President Borel, Mme. E. Rey, Rose Wynne, a variety which was very fine throughout the exhibition, and Frank Wells, a flower of a very light and pretty lemon shade. The second prize was awarded to Mr. C. Cox, and the third to Mr. R. Jones, gardener to Mr. C. A. Smith, Barford Hall, Warwick. In the class for twelve Japanese flowers, Mr. Jones won with a very fresh and even collection of blooms, in which we noticed fine examples of Rose Wynne, Mrs. E. G. Hill, Mlle. Thérèse Rey, Commandant Blusset and Mons. Charles Molin. Mr. James Brookes, gardener to Mr. W. J. Newman, Whetstone Hall, Totteridge, was second, and Mr. W. Collins, Ponsbourne Park Gardens, Hertford, third. Twelve very creditable blooms of Japanese varieties came from Mr. J. Knapp, gardener to Mr. F. W. Amsden, Chichester Road, Croydon, the blooms of the varieties W. G. Newitt, W. H. Lincoln and Mlle. Thérèse Rey being very fine. The second prize was awarded to Mr. T. L. Turk, gardener to Mr. Boney, Southwood House, Highgate. The best six blooms in the Japanese class were from Mr. J. Knapps, the second prize being awarded to Mr. A. W. Southard, gardener to Mr. H. B. Kenyon, Sutton.

The incurved flowers were naturally not so fine as those of the Japanese class. A very satisfactory six, however, were those from Mr. W. Collins, which secured the premier award. Especially noteworthy were the varieties M. Bahuant, Prince Alfred, Lord Wolseley, Mme. Darrier, and Refulgens. The second prize went to Mr. R. Filkins, gardener to Miss Alexander, Oakbank, Chislehurst. Mr. Turk, we may mention, also had good incurved blooms, winning in the class for six.

We must not omit to mention that the twelve Japanese flowers from Mr. H. Love, Sandown, Isle of Wight, were very noteworthy. Phœbus was superb in colour and form. The second prize in this class went to Mr. W. Amies, South Ashford, Kent.

Pompons were exhibited extremely well. The twelve bunches that came from Mr. Chas. Brown, gardener to Mr. R. Henty, Langley House, Abbots Langley, Herts, were amongst the finest we have seen at this season of the year. That exquisite kind Mlle. Elise Dordan was in perfection throughout the exhibition, and a variety named Flora, rich yellow, was also very beautiful. Miss Debenham, St. Peter's, St. Albans, was second. In the class for six, the last-mentioned exhibitor was to the front. We noticed in this stand a very beautiful kind named Ryecroft Glory, of a rich yellow shade, and one of the best of recent additions to this class. Mr. Turk and Mr. Chas. Brown were second and third respectively.

The groups formed a very handsome feature. Mr. H. J. Jones, Ryecroft Nursery, Hither Green, Lewisham, was an easy first. His flowers were not only extremely fine and of recent varieties, but staged with great taste, not jumbled up and massed together, as the prevailing fashion now is. In such a group as Mr. Jones' we get light and shade—an artistic arrangement. The second award was made in favour of Mr. W. Howe, gardener to Mr. H. Tate, Park Hill, Streatham Common.

Table decorations were a conspicuous feature, and many of them remarkably pleasing by their distinctness and elegance. The largest class was for the three best filled epergnes, Mr. J. R. Chard, Stoke Newington, as usual, securing the first prize. The Chrysanthemum flowers were lightly arranged with appropriate foliage. A very close second was Mr. D. B. Crane, Woodview Terrace, Archway Road, Highgate, N., whose choice of Croton leaves, berries and Chrysanthemum flowers made a happy piece of seasonable colouring. Mr. Chard was first also for a table of bouquets and wreaths. For two vases of Chrysanthemums, Mr. T. Tallett, gardener to Mr. G. Alexander, Warley Lodge, Brentwood, Essex, was first with a bold and pleasing arrangement, whilst Mr. Jas. Brookes was second. Mr. D. M. Hayler, gardener to Mr. W. Hannaford, Tenterden Hall, Hendon, won the premier award for a single vase, Mr. D. B. Crane coming second.

Miscellaneous Exhibits.

Miscellaneous groups, as usual, formed a very large feature of the exhibition. A tremendous display of the finest varieties of Dahlia was made by Mr. T. S. Ware, Hale Farm Nurseries, Tottenham. The huge fountain-like arrangement in the Aquarium was a mass of bloom, arranged in distinct blotches of colour. As the varieties have been frequently mentioned this season we refrain from doing so on the present occasion (silver-gilt medal). A similar award went to Messrs. J. Cheal and Sons, Crawley, who filled with flowers and fruit the corresponding fountain at the other end of the building. Dahlias were a fine feature, but the fruit was superb. We must mention Cox's Pomona, Mère de Ménage, The Queen, Jubilee, the finest fruits we have seen of this Apple, Bramley's Seedling, Peasgood's Nonsuch, Gloria Mundi, Bismarck, Emperor Alexander, Cox's Orange Pippin, Cellini (of splendid colour), Lane's Prince Albert, King of the Pippins (very large), Ribston Pippin and Blenheim Orange. The same award was also made to the fruit from Messrs. J.

Laing and Sons, Forest Hill. It was a splendid collection, the Apples well coloured, such varieties as Emperor Alexander, Flower of Kent, Stirling Castle, Cellini, Sandringham, Cox's Pomona, Gold Medal, Peasgood's Nonsuch, Bismarck, Lord Derby, Gascoigne's Scarlet and Alfriston being remarkable for size and colour. Mr. H. Berwick, Sidmouth Nursery, Sidmouth, Devon, also showed splendid fruit, the collection large and well set up (silver-gilt medal). Messrs. Spooner and Son, Hounslow Nurseries, Middlesex, received a silver medal for a very fine and interesting collection. Amongst other exhibits in fruit and vegetables we noticed a large display of the well-known Onions of Mr. H. Deverill, Banbury, Oxon, to which a silver-gilt medal was awarded. Messrs. Dobbie and Co., Rothesay, N.B., had vegetables, amongst them Dobbie's Champion Leek; also flowers of the single Cactus Dahlias (silver medal). Fine fruits of Apple Royal Jubilee were shown by Mr. T. Fanning, Bath Road, Hounslow.

Messrs. Cannell and Sons, Swanley, Kent, showed a splendid group of Cannas, conspicuous among the varieties being that called Queen Charlotte, the flowers red on a yellow ground; also the interesting Margaret Carnations, besides Cockscombs in a delightful and unusual series of colours, pink and many tender shades, and a glorious mass of the finest Cactus Dahlias. A silver-gilt medal was awarded. Mr. H. J. Jones had a like award for his superb collection of new Chrysanthemums, beautifully arranged with Ferns and Asparagus plumosus. A white, full, finely-formed Chrysanthemum named Emily Spilsbury is worthy of note; it is a distinct gain. The varieties of zonal Pelargoniums are numerous and fine, especially Star of Ryecroft (white, carmine-salmon centre), Alice M. Love (pink), and Etoile de Lyon, but we shall have occasion to refer to these and many other new kinds again. Messrs. Cutbush and Son, Highgate, had a large display of hardy flowers and a promising new Tomato named Polegate Seedling (silver medal). Mr. Godfrey, Exmouth, Devon, had cut flowers of Carnation Reginald Godfrey (pink) and Mary Godfrey (white); also a large collection of cut Chrysanthemums, amongst them many promising seedlings. Mr. H. Briscoe-Ironside, Cedar Lodge, Burgess Hill, Sussex, had a silver medal for Chrysanthemums. Mr. Higgs, The Gardens, Fetcham Park, Leatherhead, showed plants in full bloom of Saintpaulia ionantha from January-sown seed. Mr. W. Wells showed many varieties of Chrysanthemums (silver medal); also Mr. H. Shoesmith, Claremont Nursery, Woking, that fine Japanese variety Phœbus being especially worthy of mention. A silver medal went to Messrs. J. Veitch and Sons, Chelsea, for a group of Chrysanthemums; also one to Mr. T. S. Ware. Mr. G. Reid, The Nurseries, Beckenham Hill, Kent, had an interesting group of Dahlias and Cannas.

The floral committee of this society held a meeting on Tuesday last at the Royal Aquarium, the chair being taken by Mr. T. Bevan. The exhibits were numerous and of a high average of excellence. First-class certificates were given to—

Chrysanthemum President Armand. — A large incurved Japanese, with long, grooved, pointed florets. Colour inside carmine-chestnut, reverse brownish yellow. Staged by Mr. J. French, gardener to Mrs. Berkeley, Ambleside, Wimbledon.

Chrysanthemum Phœbus.—A Japanese; very full and deep, florets of medium width. Colour rich golden yellow. From Mr. H. Shoesmith.

Chrysanthemum Mons. C. Molin.—A large spreading Japanese, with broad flat florets. Colour a rich shade of yellow with a tinge of carmine on the outer florets. Shown by Mr. Godfrey.

Chrysanthemum Boule d'Or.—A grand novelty in the incurved Japanese section and not to be confounded with the variety already bearing that name. It is a sold, massive flower, with broad, grooved florets, and the colour is soft amber or golden buff. This came from Mr. Wells, of Earlswood.

Chrysanthemum Mons. Auguste Lacvivier. —An effective variety of the same type. Broad incurving florets of a rich crimson-cerise, reverse golden rose, which two colours form a striking contrast as the bloom is in course of expanding. Sent by Mr. Jones, of Lewisham.

Chrysanthemum Lady Randolph.—A compact, globular Japanese. Colour purple-amaranth, reverse silvery.

Chrysanthemum Mme. Marie Masse.—A pretty, early-flowering decorative Japanese. Colour rosy mauve, with golden centre. Shown by Mr. D. B. Crane.

Chrysanthemum Lady Esther Smith.—Japanese incurved. Very long, grooved curly florets; a solid looking flower. Colour white. From Mr. Owen, of Maidenhead.

Chrysanthemum Yellow Gem.—A pretty little pompon, globular in form, the tips laciniated, colour pale yellow. Also from Mr. Owen.

A new white Japanese called Emily Spilsbury was shown and was awarded a vote of thanks. Mr. Briscoe-Ironside, sent a new rotary exhibition stand for cut blooms, a valuable suggestion for those who object to the orthodox showboard. He was awarded a high commendation and a small silver medal. An American Japanese A. H. Fawkes, a yellow incurving variety, was commended. There were some other very fine novelties staged, but we can say nothing concerning their merits on account of the eagerness displayed by the exhibitors in removing them immediately the committee rose.

Royal Horticultural Society.—The next fruit and floral meeting of the Royal Horticultural Society will be held on Tuesday, October 15, in the Drill Hall, James Street, Victoria Street, Westminster. The committees will meet as usual at 12 o'clock, and at 3 p.m. a lecture on "Nut Culture in England" will be given by Mr. J. Omer Cooper.

United Horticultural and Benefit Provident Society.—We are asked to state that Mr. James H. Veitch will preside at the annual dinner of this deserving institution, which will be held at six p.m. on Thursday, October 17, at the Cannon Street Hotel. Tickets may be had from Mr. W. Collins, Secretary, 9, Martindale Road, Balham, S.W.

Notes of the Week.

Solanum jasminoides, one of the sweetest climbing plants, well merits a place under glass where there is abundant space for its extension. There is a fine specimen of it in the conservatory at Alnwick Castle, growths from 12 feet to 20 feet long bearing numbers of clusters of white flowers. These shoots are cut clean back to the main branches every year.

Collomia grandiflora.—In a recent number of The Garden this well-known species is referred to as being of perennial duration. This is undoubtedly incorrect, as it is a true annual like its brighter coloured ally, C. coccinea. It comes up every autumn in my garden from self-sown seeds, which it ripens in abundance, but never puts in a second appearance after flowering.—Senex.

Chrysanthemum Mme. Leoni Lassali is a very fine variety that Mr. Harris grows largely in the gardens at Alnwick both for cutting and for its fine effect in masses or groups. The plants are 2 feet or a little more high, but they flower from bottom to top with great profusion, showing much more lateral bloom than those of the Mme. Desgrange type. The flowers also are of fine size, reflexed form and white, shading to yellow in the centre.

A double-spathed Arum Lily.—By same post I forward to you a bloom of a double-spathed Arum Lily. It was grown from a well-matured tuber, dried off and repotted in good compost early in August. I grow a large quantity, but have not before found anything like it.—C. Bloodworth, *Nottingham.*

*** Not at all uncommon; we have had many such.—Ed.

A fine Bougainvillea glabra is the centre of attraction among many beautiful conservatory climbers in the conservatory at Alnwick Castle. Confined root space and unlimited head room would appear to be most conducive to profuse blooming, judging from the conditions under which this plant is growing. This is pruned hard back each spring, and the many long shoots this season are now terminated by wreaths of the characteristic and highly-coloured bracts.

Rudbeckia occidentalis.—The plant referred to under this in your last issue as being now in flower at Kew is certainly some other species, as that is described by Gray in his "Synoptical Flora of N. America" as having no ray florets, being placed in the section acosmia. Can it be the R. californica, which is a showy species, though less so perhaps than the best forms of R laciniata, which are found in gardens under several aliases?—W. Thompson, *Ipswich.*

Streptocarpi from Chelsea.—We have the pleasure to send herewith for your inspection a few flowers of Streptocarpus, showing the results of our latest crossings. The plants have been grown in a pit and the flowers are now very much smaller than they have been, but they are fairly representative of the colours we have obtained.—James Veitch & Sons.

*** A beautiful gathering, showing the great improvements that have been made in the colours of these within the past few years.—Ed.

Abutilons in large conservatories.—One rarely sees Abutilons so beautiful as they are in the conservatory at Alnwick, where they have an abundance of room to grow, and in their present delightful profusion of bloom suggest the wisdom of planting them more freely in spacious structures. A plant of the yellow-flowered variety has a run of 5 feet on the back wall and thrusts its many-flowered branches far out into the house. Another fine specimen of Boule de Neige hides a pillar and makes a thick column of leafage set off by hundreds of snow-white blooms.

Carnation Primrose Day.—Some fine flowers of this yellow Carnation have been sent us by Mr. H. B. May, of Dyson's Lane Nurseries, Edmonton. It has all the essential qualities of a first-rate Carnation, the flower being of fine size, clear colour, and having a long pod that will not split. It has besides a delicate scent, and in this respect is an advance upon other yellow selfs. It is an open-air kind, and worthy of a trial beside Germania, to which it may prove a fit companion. An award of merit was granted to it at the Drill Hall on June 12 of last year.

Begonia Captain Holford.—When looking through the extensive and beautiful grounds at Westonbirt the other day I saw a charming bed of this new Begonia. I never saw a finer or more suitable plant for beds. The habit and colour are perfect, while the freedom of blooming is remarkable. The colour of the flower is a bright coral-red both inside and outside the petals. It has somewhat the style of growth of Emperor, only much dwarfer. It is not yet in commerce, but I feel sure if it is ever placed on the market it will quickly become one of the leading Begonias for the flower garden.—J. A.

Dendrobium Phalænopsis Schrœderianum.—We are reminded of the exceeding beauty and the great diversity of colours in this Orchid by a gathering from Mr. J. Cypher, of Cheltenham. The colours range from purple and purplish rose to the delicately beautiful lighter tints, in which the ground colour of pure white is softly suffused with rose or purple. In one case the flowers are nearly pure white. It is a free growing plant and enjoys an abundance of moisture and heat. The flowers last a long time in perfection after they have been cut, which still more adds to their

value. The good old Dendrobium nobile in this has a formidable rival.

Nectarine Vineux Henri de Monicourt.—Messrs. Transon Frères, of Orleans, send us this. It is a very interesting and quite a distinct fruit, but we are unable to judge of the flavour after such a long journey as it has undergone, though we should say it would be well worth a trial. It is a late kind, ripening at Orleans from the 1st to the 10th of October, of medium size or large, and having a smooth, shining surface. It has a dark blood colour, striped with violet; the flesh is blood-red, and we are reminded of a Beetroot. Messrs. Transon describe it as a well-flavoured and juicy fruit, the tree vigorous and fertile.

Tubercus-rooted Begonias.—I am sending you a few blooms of my new seedling Begonias from my own seed sown this year. They are flowering in the open, therefore have been knocked about a good deal by rain and cold. Of course they will be much larger and finer next year.—Edward Edwards, *Holmeside, Leighton Buzzard.*

*** A lovely series of Rose-like flowers, some colours delicately tinted like a Tea Rose, some brilliant self, others salmon-buff. All the colours are good, none of those magenta shades so unpleasant and poor in many flowers. The blooms are perfectly double, without the ugly centres that disfigure many tuberous Begonias. We hope Mr. Edwards will go on raising such beautiful things as these.—Ed.

Two good pillar Fuchsias.—We are glad to see an extended use is being made of Fuchsias to clothe the rafters and pillars of glass structures. They are often very beautiful at Kew, and in the Chelsea nursery one house has all its main rafters clothed with Fuchsias. In the conservatory at Alnwick they are equally beautiful as pillar plants. Two varieties not long planted here Mr. Harris thinks highly of, as they are of rapid growth and quickly attain great height or length, a most essential thing. One is Miss Rundle, which has made a leader 12 feet long this year, as well as flowered abundantly on the laterals. It has blush-white sepals and bright red petals, and is a long, lovely flower. Olympia, almost as free growing, has flowers of a purplish rose in the petal, but with blush calyx.

Kniphofia pauciflora × Macowani.—This interesting hybrid was raised at Kew by Mr. Dewar, and flowered soon after he went to Glasgow. It has no claim to floral beauty, and I am afraid Mr. Gumbleton would class it among the "tush" plants. When Mr. Baker drew up his description of it in 1893 the flowers were white, but several other plants of the same cross have since flowered, and they show variety, one having creamy yellow and another yellow and orange-coloured flowers. The leaves are each from 1 foot to 18 inches long, narrow, triangular, the margins scabrid; the scapes are nearly 2 feet long and the flowers form a head 3 inches long, each flower measuring three quarters of an inch. K. pauciflora is a slender little species of doubtful hardiness, which first flowered at Kew in 1889.—W. W.

Kniphofia Nelsoni.—I agree with Herr Max Leichtlin's description of K. Nelsoni if he will allow me to add that it is the loveliest of all Kniphofias of its class. It will not compare with such gaudy giants as August Wilhelm or T. H. Ware, or even the grand old typical K. caulescens itself. If Kew had not received a plant of K. Nelsoni from Mr. Gumbleton last year I should have concluded from what he says of this species on p. 256 that he had got hold of the wrong thing. The Kew plant has now five spikes, two of which are within an inch of 4 feet in height, and two nearly 3 feet, whilst in colour the flowers are as brilliant a scarlet as those of K. corallina. Mr. Gumbleton's plant must be out of condition. I am certain that if he saw the Kew plant he would be willing to award a place among the good garden plants to K. Nelsoni.—W. W.

—— With gardeners the opinions about plant beauty may differ, but certainly Mr. Gumbleton would have a much higher opinion of the beauty of this plant if he could see the charming group in my garden here. The strongest plant has twelve scapes, the longest 54½ inches and the smallest 28½ inches high; the spikes are respectively 8 inches and 4¾ inches long and 1 inch to 1¾ inches thick. I fear Mr. Gumbleton has either a bad variety or the climatic or other conditions at Belgrove do not exactly suit it. The colour of my blooms is superior to that of those of K. Macowani, and the foliage continues to grow on in winter and does not even look faded, but fresher and of a healthy green. The long narrow spikes and the high colour give it a peculiar charm and elegance. I am quite sure it will become a favourite when better known, and I still maintain what I have stated about its beauty.—Max Leichtlin, *Baden-Baden.*

Kniphofia Woodi.—Plants of this new species were sent to Kew last year by Mr. Medley Wood, curator of the Botanic Garden at Natal, after whom it is named. One of them was planted out in a border in a cool greenhouse, where it has lately flowered. It resembles K. modesta in general characters, but is stouter, and the leaves have a few distant marginal spines. The scape is 3½ feet high and the flowers are in a dense, narrow head 9 inches long, each flower being only half an inch long and of a pale cream colour. In K. modesta, which first flowered at Kew in 1889 and may be seen in bloom there now, the scapes are only 2 feet high and the leaves have smooth margins, otherwise the two might be called mere forms of one species. Probably K. Woodi will prove useful to breed from; it grows and flowers freely in a cool house. Whether it would do out of doors has not yet been proved.—W. W.

Anemone japonica alba var. Lady Ardilaun.—In The Garden (September 14, p. 198) "J. C. B." refers to the above as being subject to discoloration of foliage. I being the raiser of this Anemone, and having grown it from its infancy up to the present, will gladly give my experience for "J. C. B.'s" information. I have grown it in various positions and have had no experience of the spots referred to save on one occasion, when I planted a bed which had been heavily dressed with fresh manure. For the first two seasons the foliage of the plants in this bed became spotted as described by "J. C. B.," the third season the plants attained a height of 5 feet, well furnished with luxuriant foliage quite free of any blemish. I attribute the cause of the discoloration the first two seasons to the rich soil in which they were planted. I have found this Anemone do admirably in fresh soil and leaf-mould thoroughly pulverised to a depth of at least 18 inches. If planted firmly and supplied with water in dry weather until the roots become established, the plants grow freely and develop their large glossy leaves, crowned with an abundance of bloom, which in time is replaced with large heads of seed. These if allowed to become ripe can be drawn out to a width of 6 inches, left intact, and laid on a seed pot or pan prepared for them, covering them lightly with sandy soil, placing a piece of glass over each pot and giving a little water as the surface becomes dry. Plants which will flower freely the following autumn will be produced.—A. Campbell, *The Gardens, St. Anne's, Clontarf, Co. Dublin.*

The weather in West Herts.—The seventh warm week in succession and the hottest of the series. On five days the highest shade temperature exceeded 75°, and on the 26th and 27th 82° was registered. The nights were uniformly warm for the season, and the exposed thermometer on no occasion fell below 43°. Until the night preceding the 2nd inst. (when nearly a quarter of an inch fell) there had been no rain sufficient to lay the dust for nearly a month; indeed, no rain-water whatever has come through either percolation gauge for over a week. During September there occurred only two unseasonably cold days, but a good many moderately cold nights. On three days the maximum shade temperature was 82°, which is a higher reading than any recorded here in September during the previous ten years, and, with one exception (May 30), higher than any similar reading registered this year. At 1 foot deep the ground, taking the month as a whole, was 1½° warmer than in any September since observations were started here in 1885. Practically the whole of the total rainfall was deposited during a thunderstorm on the night of the 6th, and amounted to less than 1 inch. During the past forty years there have been only two Septembers at Berkhamsted as dry—viz., 1865 and 1890—and only one (that of 1865) with as few rainy days. There occurred only one day when no sunshine at all was recorded, and on as many as twenty-two days the sun shone brightly for over seven hours a day. As compared with the ten previous Septembers, the aggregate record exceeded the brightest of these by as much as fifty-one hours. Besides being such a very warm, dry and sunny month it proved also the calmest September of which I have here any record; in fact, the average rate of movement of the air at 30 feet above the ground was only four miles an hour. The atmosphere was, moreover, drier during the past month than in any of the preceding ten Septembers.—E. M., *Berkhamsted, Oct.* 3.

—— The weather of the past week has been in every respect a contrast to that of the one preceding it, being cold, wet and sunless, with higher winds and a much more humid atmosphere. The day temperatures have, as a rule, been only about seasonable, but on two nights the exposed thermometer fell to within 5° of the freezing-point, and on two others slight frosts were indicated by it. During the week the temperature of the ground at 2 feet deep has fallen nearly 5°, and at 1 foot deep nearly 7°. At the latter depth the reading is now, however, still 4° above the average for the month. Rain has fallen on every day but one this month, and to the total depth of nearly 2¼ inches, so that during the last eight days there has been as much rain as in the previous seven weeks. No rain water at all came through either percolation gauge during the nine days preceding the 4th inst., but since then an amount equivalent to about four and a half gallons through every square yard of surface has come through them. The wind blew with the force of a gale during the afternoon of the 3rd inst.—the highest record was thirty-two miles for the hour ending 3 p.m.—the direction west. This is the strongest wind experienced here since March 24. On three days no sunshine at all was recorded, and on one the sun shone for less than an hour.—E. M., *Berkhamsted.*

Ostrowskia magnifica.—I got two plants of this last year about 10 inches long. I put one into a 9 inch pot, the other into the open border. They both stood over last winter and grew about 9 inches high, then withered away. The roots at present appear healthy. Can any reader assign a reason for this?—J. Rankin, *Airdrie.*

BOOKS RECEIVED.

"Orchids: their Culture and Management." Second edition. Revised. By W. Watson and W. J. Bean. Upcott Gill, 170, Strand, W.C.

"Ferns, British and Foreign." New and enlarged edition. By John Smith, ex-curator, Royal Gardens, Kew. W. H. Allen and Co., Waterloo Place, S.W.

Names of plants.—*Aquatic.*—Sanguisorba canadensis.——*W. A. G.*—Ligustrum japonicum.——*E. A. L.*—Salix caprea.——*Vanity.*—Specimen too far gone to identify.——*Ignorant.*—1, Malva trimestris; 3, Polygonum cuspidatum; 5, Eulalia japonica zebrina; 6, Diplacus glutinosus; 7, Ophiopogon Jaburan variegatum. Others next week.

Names of fruit.—*A. Watson.*—Louise Bonne.——*R. A. P.*—Ribston Pippin.——*Stormouth and Son.*—Apple Scotch Bridget.——*D. M.*—1, Nouvelle Fulvie; 2, Fondante d'Automne; 3, Baronne de Mello.——*Marple Bridge.*—Buddleia globosa.

No. 1248. SATURDAY, October 19, 1895. Vol. XLVIII.

"This is an Art
Which does mend Nature: change it rather; but
The Art itself is Nature."—*Shakespeare.*

FLOWER GARDEN.

MICHAELMAS DAISIES.

What I write in my notes about flowers is founded on my experience of them in the latitude and climate of the midland counties. It may not all be true if tested by their habit in the Isle of Wight or in Perthshire. For instance, when I write that a plant is better in Cheshire for being sheltered from cold winds, and a correspondent replies that this is quite a mistake because it grows well in the south of Hampshire without any such shelter, most readers will perceive that the two places in question are rather different. This preliminary remark is especially required in writing of Michaelmas Daisies. Taking average seasons, we should find that the Michaelmas Daisies of Surrey, of Yorkshire and of Aberdeenshire are represented by three different sets of plants, and that those which flower at Michaelmas in the first-mentioned county would never reach flowering at all in the last. Still, it is not before Michaelmas, but after it, especially where florists' Chrysanthemums will not flower out of doors, that most of us want Michaelmas Daisies; and therefore our selection of them must be suited to the climate in which we live. This year most of them have been too early, or rather too short, in their duration; they came in with a rush at the beginning of September, and after a very bright life were many of them over by Michaelmas Day. Those which come out after it will not live so fast and will last longer. One good result of the early flowering is that seeds are sure to ripen, and so improved varieties may be got. To give a list of names of the best varieties is of very little use, even if the names are correctly given. Those amateurs who will take the trouble—and it is very little trouble where there are a few square yards of ground to spare—to raise a thousand seedlings from seed of the best varieties may have something better than the best varieties, and suit them to their own taste. The plants will, if seed is sown in the open air in February or in late autumn, nearly all of them flower the next September. A mark should then be tied to fifty of the best of them, and when the leaves are brown the fifty should be promoted to a better place. This movement may be made any time that frost is out of the ground. By raising seedlings in this way I have already superseded at least half the flowers honoured with three stars by the Chiswick conference.

I must say something about colours. Ancient writers speak of a plant called tripolium, which changed its colour three times in the day, having a distinct morning, noon and evening colour. Perhaps by accident the name was attributed by our early herbalists to an Aster, but certainly Michaelmas Daisies seem to deserve that name because they vary remarkably, according to the way the light falls upon them, and the same flower will seem of a very different hue before breakfast, and at noon, and an hour before sunset, the last of the three aspects being by far the best, and as the fullest light is the most trying for them, midday is the time at which they ought to be judged. In the old Novi-Belgii types, mauve—a sort of pale red-purple, a colour abjured by artists—prevailed. We have quite enough of these, but want lighter and darker and purer colours. A flood of whites has come upon us in the last three or four years. At the Chiswick conference good whites were very limited in number, but making every allowance for the whiteness which has prevailed in the versicolor section this season, owing to the sunshine and the absence of rain, we now have pure white Asters enough to satisfy us for several years. From the bright little versicolor nanus, rising hardly 6 inches from the soil, to forms nearly as tall and large in the flower as puniceus pulcherrimus—8 feet high—there are so many good whites of every stature and coming in succession, that I find it hard to make a selection for naming. Blues (I mean true blue) are still a great desideratum. Archer-Hind is late for Michaelmas here, and after all is not bright enough to look really blue at a distance. A seedling I sent to several gardens two years ago named Nancy is a really conspicuous pale blue of first-rate habit, but a little too early. I have raised two or three other blues, of which I wish to see more before naming them or letting them go into public.

The varieties of Amellus are all of them this year too early and over before October, but out of two or three hundred seedlings which have flowered here and which vary much, I can find only three which come near real blue, and these are nearest it in a clear evening. Most of them mix red in their colouring and are deteriorated in proportion to its quantity; still a close mass of these flowers a yard or more in diameter is gorgeous. The white Aster Amellus from Geneva has so far disappointed me, both rays and disc being small and dingy. I hope to improve it from seed which it is making. It is hard to find names for colours, but there is a clean and pleasing colour prevalent amongst my seedlings, something between pale brown and lavender. It is rather a new colour in Asters, and so worth selecting. Many of these have a diffuse branching habit like turbinellus, which has a good distinct habit, but is generally too late here. As for dark purple, arcturus, a plant of fine habit, is the best I have; seedlings from it have all come of lighter shades. For free-flowering and elegant spreading form down to the ground, W. J. Grant is still unsurpassed if well grown. For pink, the dwarf Aster called at the conference lævigatus is, as far as I know, in possession of the field. The tall varieties called rosy and red of Novæ-Angliæ are of a different colour from this, but all the Novæ-Angliæ forms are too tall; out of 100 seedlings I produced no improvement on W. Bowman, and the red varieties do not choose to come dwarfer. It only remains to say a few words on the cordifolius class, of which Diana, when well grown and allowed free room to spread and hang down its elegant waving plumes, remains the greatest favourite. It must not be in dry soil or in full sun, as it withers before flowering in such situations, but it wants moist, light soil and shelter, if not shade. It is one of those plants so often asked for which like a northern aspect. I have many seedlings from it which equal or surpass it, having even larger plumes; one or two with rays of pure white, but retaining the purple disc, are worth notice. Much more might be said about the whole class and its treatment, but I hope that by limiting these notes I am making room for others to have their say on the same subject.

C. Wolley-Dod.

Edge Hall, Malpas.

Polygonum sachalinense.—This is now a fine feature in the garden at Fairlawn, Wimbledon Common, the residence of Sir Edwin Saunders. A large clump on a cool shaded border has produced its delicate greenish yellow flowers in long pointed axillary racemes. A more accommodating or persistent plant it is difficult to name, and it grows and flowers with little if any trouble to the cultivator. Blooming freely at this season of the year, it makes a very ornamental late summer flowering perennial of bold and striking character. —R. D.

Primula capitata.—As an autumn blooming plant this lovely species is decidedly the most beautiful and certainly the most welcome by reason of its free and continuous flowering. A large group of it that has been in bloom for some time past in the rock garden at Kew shows its free-flowering character. Some of the heads are in full flower, many others just expanding their earliest blossoms, and others again in every stage of development. It is certainly a valuable species from a variety of standpoints, as, apart from its more natural season of flowering, it may be had for a great part of the year by simply regulating the raising of the seedlings. It should always be understood that it is not a good perennial—that is to say, its greatest decorative value is not forthcoming when treated as such. But if regarded more in the light of a biennial, raising three or four batches of plants every second year or two batches each year, the various stages and ages of the plants would produce an unceasing array of bloom. But if the plants are to be wintered in the open, care should be taken that they do not approach flowering at the opening of winter. By planting in various positions also much may be done with it. The group at Kew is raised somewhat, and, standing well to the view, the rich deep violet-purple of its flowers appears in striking contrast with the dense silvery meal that covers stems, leaves and flower-buds. As a garden plant it has a special value in providing so rich an array of blossoms when the major portion of the Primrose family is at rest. It is of quite easy culture if given a good depth of sandy loam and kept fairly moist in dry weather.—E. J.

FLOWER GARDEN NOTES.

The Begonia disease.—A comparison between Mr. Tallack's remarks in a recent number, those on p. 264 and the editorial note appended to the latter would seem to indicate that some mistake has been made, and that the leaves sent to The Garden office to illustrate the disease were changed, as it is not reasonable to suppose that writers like Mr. Tallack and "J. C. C.," who are apparently keen observers in flower garden matters, would not be aware of the condition of leaves attacked by thrips and attribute it to a disease of a mysterious character. Certainly the Begonia disease, as we have it here, is not caused by any insect, but is more like the fungus or black mildew that is answerable for so many failures with Lilium candidum, and, as stated in last week's Garden, I have found nothing as yet to check its progress. It would be a great boon if any grower troubled with the disease who has tried remedial measures and found them effectual would give the benefit of his experience.

Special hardy flowers for cutting.—With the view to carry on information for another year's requirements, I have jotted down from time to time through the past year in their respective seasons those hardy flowers that have proved most serviceable for cutting, and although tastes may and do differ to a considerable extent, it may be taken for granted that those things enumerated below are hardly likely to go out of favour, and their planting, where not already established, may be safely recommended. Daffodils are about the earliest flowers obtainable in quantity, and may be planted at once in the varieties recommended by those firms who rank as specialists of this flower, the cheaper sorts in their hundreds or thousands with a few choicer varieties as they can be obtained, the chief point being to choose sorts to command a flowering season from (weather permitting) the beginning of February until nearly

the end of May. I should, however, like to note that it is hardly advisable to attempt the naturalisation of Daffodils on a large scale on a poor soil with a light sandy subsoil coming up rather close to the surface. Under these circumstances where they are required in quantity, a portion of a slip garden may be set aside for them where the natural soil has been improved by cultivation, and space is limited they can be planted occasionally between rows of Red Currants, Gooseberries, &c. The single varieties of Pyrethrums are most in request for cutting, and if the stock is to be increased, they may be split up and replanted before the approach of sharp weather. They are at their best in a fairly stiff soil that has been well worked and a mulching should be given at planting time. The colours range from snow-white to intense crimson and deep maroon, and, as noted in the case of new Phloxes, the varieties of more recent introduction are not only altogether finer in flower, but the individual petals are larger, more thickly set and of much better substance, considerably enhancing their value in a cut state.

Spanish Irises.—These may now be planted where space will permit fairly close together, as the growth, in comparison with that of some sections of the family, is small. The bulbs can now be obtained cheaply by the thousand, and such a quantity would give many shades of colour and varied forms. As they are over rather early in the season, they should be planted at a sufficient depth so that some dwarf plant may occupy their place later in the year without injury to the bulbs. Among useful flowers for summer cutting the Montbretias take high rank. To make sure of early flowers they should be well mulched in winter, or if the weather proves very sharp, the young growth that is pushing will be cut hard back and the flowering season thereby considerably delayed. This system of mulching will also be put in force in the case of Gypsophila paniculata, that invaluable plant alike for flower garden work and for cutting. Where unprotected, it succumbed to the exceptional weather in February, 1895. With the single exception of the Rose, no flower is so much in request for small vases and button-hole work as the Carnation, and as one does not always care to cut from the beds in the flower garden, it is advisable to plant a batch for cutting on some prepared border. Good hardy sorts of distinct shades that will throw plenty of flower and are non-splitters are the best for the purpose; the old white and crimson Cloves—if the latter will not do well, Murillo may be substituted—Ketton Rose and James Kirkpatrick are serviceable sorts. At one or two summer shows where dinner-table work entered rather largely into the arrangements, Papaver nudicaule was more in evidence than any other flower, and seems growing in favour with each succeeding year. Having acquired a good batch of the different shades from seed, I planted them as tiny little things on a rather stiff border that was already partly filled with bush Apples, keeping them of course well away from the trees. They grew amazingly, the amount of flowers obtained being very large, and this section is additionally valuable from the fact that it is not short-lived like the majority of Poppies, but will keep flowering away for several months. I had to move the stock of Statice latifolia early in the year, and, the dry weather following, it has not taken kindly to its new quarters, not sufficiently so, at any rate, to give a good supply of its long panicles of flowers so acceptable for cutting at this season of the year. The very dry time was also answerable for a comparative failure with the Spiræas, many spikes of flower not developing at all, but literally drying up. The best results were obtained from a batch of S. astilboides planted under a north wall in a rather stiff, moist border. I removed all the imperfect flower-spikes from other varieties, and the rains commencing about the middle of July set the foliage up wonderfully, but the check had been too much for the plants, and the small flower-buds showing low down the stems did not develop sufficiently to recompense for the loss of the earlier bloom. When the Starworts and the perennial Sunflowers make their appearance there is never any lack of flowers, and, with no frost up to the time of writing (October 11), the display in 1895 is naturally prolonged and the supply of cut flowers abundant. One of our most welcome autumnal flowers is certainly Aster Tradescanti. It is used in a cut state in many ways and for many different purposes, and in all bears itself bravely and well. Let me recommend for dinner-table work this Starwort associated with the purple Cosmos bipinnatus, an arrangement with very common flowers, but hard to beat with choicer things. Both are of graceful habit and stand well in a cut state, whilst one has only to pick a flower from the one and a spray from the other and place them together to see what a charming blend of colour is obtained. The latest Starworts we have are diffusus, horizontalis, pendulus, and grandiflorus, and, as previously advised, it is desirable to plant these in such a position that they can receive a little protection in the shape of tiffany when the glass drops below freezing point. The earlier of the white-flowering Chrysanthemums are either in flower, or soon will be, and the last-named of the three Starworts—grandiflorus—will be found very serviceable to mix with the Chrysanthemums. Among the very best of the annuals of the present year has been Cosmos bipinnatus in the three shades of white, pale rose, and the purple mentioned above, as associating so well with Tradescant's Starwort. Given plenty of room, so that individual plants can develop fully, they grow quite 6 feet high and continue furnishing plenty of bloom until the frost cuts them down. The flowers look very fragile, but stand remarkably well; indeed the placing into water seems almost to give additional stiffness to the flower-stems. E. Burrell.

Claremont.

Delphinium Breckei and its variations from seed.—Some three or four years ago I got from a leading Scotch florist and nurseryman a plant or two of the above-named most charming dwarf deep blue Larkspur, obtained rather over twenty years ago by the late Doctor Breck, and which has since borne his name. At the same time I also received a plant of the pure white-flowered form of this plant, and though they are both perfectly hardy and almost, if not quite, perennial, as it was rather late in the year when they came and they were both covered with flower-buds, I grew them both in pots in the cold greenhouse. After blooming profusely they both of them ripened a fair quantity of seed, which was carefully saved and sown in two pots. Nearly every seed came up, and the following spring the seedlings were planted out in two lots in a nursery bed. When they came into flower in the early summer I was much surprised to find that every plant of both lots of seedlings produced deep blue flowers without a single white among them. The plants in due time again seeded, and amongst a bed of some hundreds of seedlings, all from blue flowers, have now appeared two plants bearing pure white flowers. Being without the white variety at the commencement of this summer, I sent to the same nurseryman for four young plants of it, which I certainly expected would not cost me more than 1s. each, and was much surprised to find them charged at the comparatively high price of 2s. 6d. each. A prettier bed than one filled with this neat growing deep blue Larkspur one could not have in a garden, and if not allowed to seed it will continue blooming on the side shoots till quite the end of the autumn.—W. E. Gumbleton.

Crocus speciosus.—Every year I am constrained to call attention to this beautiful species. It has been blooming abundantly for three weeks past, and it is seen at its best when it has been carefully planted, say, a half dozen corms in a patch in good soil, and then let alone. It spreads quickly, and a cluster which has had two or three years' development blooms very freely. It should be remembered by those unacquainted with the species that it is a nude-flowering type, throwing up its bright violet flowers in autumn and its grass in spring. For exquisite beauty I do not think we have any spring-flowering Crocus which can compare with it.—R. D.

CAMPANULAS.

No rock is too high, no vale too low
For its fragile and tremulous form to grow;
It crowns the mountain
With azure bells,
And decks the fountain
In forest dells;
It wreathes the ruin with clusters grey,
Nodding and laughing the live-long day.

Miss Twamly.

It would be difficult indeed to name a genus of flowering plants so endeared to lovers of hardy flowers as that of the Hairbells, or Bellflowers. Campanulas were among the most favoured flowers in the gardens of our ancestors many generations ago, and favourites they are still to the present day. Other flowers have come into fashion and have in due course been discarded for the fashions and fancies of more recent times, but the Bellflowers have held their own, and there is scarcely a garden in the land, from the luxurious pleasure grounds surrounding the mansion of the squire to the humble cottage garden of the peasant, where Bellflowers of one sort or another do not form a conspicuous feature. Such general popularity cannot be attained by any species of plant without decided merit, and great merit from every point of view is certainly possessed by the genus Campanula. Not only are most Bellflowers very easy to cultivate, but their variety is so enormous, that plants to suit all sorts and conditions may be chosen from their ranks; and it has been truly said that a garden might be made beautiful for the whole summer season by means of Campanulas alone if the varieties chosen are such as would furnish blooms in succession. We may choose from kinds growing only 2 inches or 3 inches above the ground to such as would attain the stately height of 5 feet to 6 feet; we may have Bellflowers which bloom in May, or we may choose varieties which will last till September; we may grow Campanulas which would be useful as cut flowers for indoor decoration, and we may grow such as would permanently adorn a rock garden intended for the choicest gems of the alpine flora. We may grow bold, upright Campanulas that would brighten the margins of shrubberies and herbaceous borders on a large or small scale, and we may grow kinds with pendent shoots fit for the window boxes of a cottage or as basket plants for hanging in the verandah of a mansion. Surely such all-round usefulness deserves to be recognised, and it is no wonder, therefore, that the Campanulas enjoy such universal favour not only in this country, but all over the world.

The natural distribution of Campanulas is a very wide one. They are found in every part of the globe, from the wilds of Siberia to the sunny tropics, sometimes on the fertile soil of the plains and valleys, and sometimes covering the rocky slopes of mountains and ascending to the height of the snow-line. The Bellflowers comprise a genus of between 200 and 300 species, but by far the greatest number of these are indigenous to the south of Europe, especially the mountains of Southern France, Spain, Italy, Greece, Turkey and many islands of the Mediterranean Sea. The species which are considered natives of Great Britain are very few, and in Sir J. D. Hooker's "Students' Flora of the British Islands" (third edition) only eight

species are enumerated. In Central Europe, too, there are not a very great number of species found in a wild state; thus, for instance, Dr. August Garcke's "Flora of North and Central Germany" describes only twenty-five varieties.



Campanula garganica. (*Fig.* 4.)

In America the number of native species is much smaller still. But in spite of the comparative scarcity of native Campanulas in Northern Europe, and in Great Britain in particular, there is perhaps no country in the world where the introductions from the southern mountains have found a more welcome home than in these islands, where the climatic conditions are so favourable to the Bellflowers, that only very few of them require any special attention, but mostly take care of themselves when once established.

The object of this essay is not to give a synopsis of all the Campanulas grown in Great Britain, but rather to select only the very best and to describe a few of the most interesting sorts. As I also propose to give a few hints about the arranging of Campanulas, I think I cannot do better than divide my subject, not according to the botanical distinction of the various species, but from a practical rather than a scientific point of view. With this object, I will divide the Bellflowers into four classes, according to the purposes for which they are best suited, viz.:—

Section I.—Dwarf Campanulas suitable for the select part of a rock garden.

Section II.—Dwarf Campanulas generally suitable for rock gardens or front of borders.

Section III.—Campanulas of medium size mostly suitable for borders.

Section IV.—Tall Campanulas for borders or isolated specimens.

That this form of division is not scientific I am quite willing to admit, but it is of practical value to those who are unacquainted with some of the names, but would choose their plants according to the purpose for which they intend to use them regardless of botanical distinctions. In nearly every case the descriptions are based on my own observation, and in recommending this or that position for a plant I have been guided by practical experience. There are many other beautiful Campanulas not mentioned in this paper, but, unless the selection is intended for a botanical collection, the names here given will be found sufficient for most gardens.

Much might be said with regard to the arranging of Campanulas, but I must be content with briefly mentioning one or two of the most important points. Whether on rockwork or in borders, most hardy flowers look infinitely better arranged in irregular groups of varying sizes than dotted about singly, and Campanulas are no exception to that rule. On the contrary, we might even have different groups of Hairbells adjoining each other if care is taken to blend their colours harmoniously, which should be an easy matter considering the many shades of colour from pure white to all shades of blue and purple. Of other hardy plants which might be associated with Campanulas there are perhaps none better than the perennial Poppies. The contrast of colour between these and the Hairbells is one of mutual advantage to both, and as they flower at the same time each is enhanced by the other. Campanulas of the dwarfest types in the rock garden may be associated with the varieties of Papaver alpinum. Hairbells of medium size go well with Iceland Poppies (Papaver nudicaule), and the tall Campanulas, such as C. pyramidalis, C. Medium, &c., are excellent companions in every way to the giant Poppies of the Papaver orientale type. There are, of course, many other classes of hardy plants suitable for associating with Bellflowers, but I know of none that would surpass the Poppies. As the nomenclature of Campanulas is in a somewhat confused state owing to some of the varieties being known under several different names, I have thought it best to add where possible the authors of the names.

Section I.—Rare and choice kinds of Dwarf Campanulas suitable for select part of a Rock Garden.

It is not absolutely necessary that the Bellflowers described under this section should be grown in a rock garden. They will, for the most part, succeed in an ordinary border containing sandy loam mixed with a few stones, but as their native home is among the rocks, it is in a similar position that they would give the most satisfactory results in our gardens. Several of those here enumerated come from very high altitudes, and a cool position such as they would find on the north side of a rock garden is essential to their well-being.

Campanula Allioni (Vill.).—This little gem is also known under the names of Campanula alpestris (All.) and Campanula nana (Lam.), and is a native of Piedmont. The corolla is very large for a plant growing seldom more than 3 inches or 4 inches in height, purplish blue (rarely white), urceolate in shape, almost erect on a slender stalk, slightly covered by pubescence. The leaves are linear-lanceolate, with margin entire or very slightly crenate. It is an excellent rock plant, and though requiring plenty of moisture, it should have a well-drained position, and is therefore best grown in a narrow crevice filled with sandy loam and an abundance of small stones and grit. Flowering time, May to August.

C. cenisia (Linn.).—As its name implies, the native home of this little gem is Mont Cenis, but it occurs wild in many other parts of Switzerland and Italy, generally at very high altitudes. I saw masses of it quite close to a glacier in the neighbourhood of Bourg St. Pierre, growing, in fact, in the moraine of the glacier in company with Linaria alpina and Ranunculus glacialis. It has solitary deep blue flowers on short stems only 2 inches high. The radical leaves are obovate, while those of the stem are ovate-oblong. It flowers in June.



Campanula Medium. (*Fig.* 10.)

Owing to the high altitude at which this little gem is found in its native country, it seldom does well in English rock gardens if planted on a dry slope exposed to the full sun, but it does remarkably well if planted on the north side of a

rock garden where it can have plenty of light, but where the air is cool and moist.

C. Erinus (Linn.).—This is another little gem, but unfortunately not of very long duration. Its native home is on the shore of the Mediterranean. The flowers are very freely produced and appear in semi-prostrate long racemes, each bearing ten to twenty flowers. The individual blossoms are pale blue with light centre, and the star-shaped corolla is scarcely half an inch in diameter, with very acute narrow lobes. The style is conspicuous by its great length and is of the same shade of blue as the corolla. The blossoms often last till September. The small bright glossy green leaves, varying from a quarter of an inch to three-quarters of an inch in diameter, are cordate in shape, but very deeply cut, the pointed lobes being very conspicuous.

C. excisa (Schleich).—A rare and interesting species from Switzerland, usually found at very high altitudes; the flowers are pale blue and the lobes of the corolla are very deeply cut. At the base between each two lobes this incision takes the shape of a round hole, and it is probably this peculiarity which suggested the very appropriate name. It usually blooms in June, but I saw it in blossom as late as August on the rockwork at Kew, where it seems to thrive remarkably well. The leaves are linear-lanceolate with margins entire. The whole plant is not more than 4 inches or 5 inches in height and likes a position not fully exposed to the sun, but where the air would be cool and moist.

C. Raineri (Perp.).—A native of high mountains in Italy and some parts of Switzerland. It is one of our choicest rock plants, but the true species is rare in English gardens, and several forms of the hybrid Campanula G. F. Wilson are often seen under the name of C. Raineri. The latter, however, is quite distinct, and one of the best means of identifying the true C. Raineri is by the leaves, which are of a deeper green and more tomentose than in the hybrid species referred to. The flowers are solitary, large in size, of turbinate shape and dark purplish blue in colour. The leaves are sessile, obovate and ovate with serrated margin. The plant is seldom more than 3 inches in height and enjoys a well-drained, warm, sunny position. It is well worth a place among choice things in the select part of the rock garden.

C. Waldsteiniana (Roem. and Schult.).—Croatia and Hungary are the native homes of this charming Bellflower, which grows only 4 inches to 6 inches high, and makes an excellent rock plant in many English gardens. The flowers appear in corymbose racemes of from five to nine blossoms each, the individual blooms having an almost rotate corolla a quarter of an inch in length and three-quarters of an inch in diameter, of a pale purplish blue colour, with lobes spread out almost flat so as to give the flower quite a star-like appearance. A dark spot marks the throat of each flower. Conspicuous also is the large white club-shaped pistil, which is twice the length of the corolla and bears a yellow stigma. The calyx is very short, and its acicular lobes are recurved in a peculiar way. The pedicels are varying in length and bear several bracteoles. The stems are very rigid and bear somewhat fleshy sessile leaves of greyish green colour, alternately arranged, of lanceolate shape, with margins slightly serrate-dentate.

C. Zoysi (Wulf.).—This is a native of the Austrian Alps, and a rare little gem for the rock garden. It is, however, very seldom seen to perfection in English gardens, probably on account of its being very liable to perish during winter through excessive moisture. The best lot I have seen I noticed in a rock garden in Essex, where a large overhanging ledge of rock formed a kind of cave. Here it was blooming profusely in August. The plant grows scarcely more than 3 inches or 4 inches in height and bears pale blue flowers of drooping habit, with a rather long cylindrical or tubular corolla. The radical leaves are obovate, while those of the stem are lanceolate.

Section II.—Dwarf Campanulas generally suitable for Rock Garden or Front of Borders.

This section comprises the greatest number of Hairbells, and from these I have selected what appear to me the best and most suitable for the purpose indicated. Some of the varieties here mentioned are excellent rock plants, especially those with long pendent shoots, which would display their flowers to the greatest advantage if allowed to hang down over the rocks. Others, again, form compact carpets most suitable for level ground, either on rockwork or border. Most suitable edging plants are also contained among this section.

Campanula alpina (Jacq.) is a native of the Carpathian Mountains, and varies from 3 inches to 8 inches in height. The flowers are disposed on an erect pyramidal raceme and deep blue in colour. The flowers consist of a tube about 1 inch in length and half an inch in diameter, with triangular lobes completely turned back. The pistil is large and club-shaped; the lobes of the calyx are linear and as long as the tubular part of the corolla; the leaves are sessile, lanceolate, obtuse, of a dark green colour with margins entire, but covered with hair to such an extent as to give the whole plant a shaggy appearance. It is a capital rock plant and very easy of cultivation; it flowers in June and July.

C. barbata (Linn.).—This variety (see illustration fig. 11) varies much in size. At high elevations in the Alps of Southern Switzerland I saw large numbers of it no higher than 2 inches or 3 inches, but as a border plant in English gardens it will often attain a height of 9 inches or more, and its leaves will be coarser in proportion. In the Alps its pale porcelain-blue flowers close to the ground are exquisite. The blossoms are perfectly smooth outside, but covered with hair on the inside of the corolla; they appear in a loose raceme from the axils of the leaves, which are lanceolate in shape. In the rock garden it should be grown in poor, stony soil, as it is apt to become somewhat coarse when grown in rich soil.

C. cæspitosa (Scop.) (see illustration fig. 1).—This is perhaps still better known under the name of C. pumila (Curt.), and is one of the most useful plants in our gardens. It flowers almost continually from May to August or September, and quickly forms a very neat and compact carpet. The leaves are almost orbicular or ovate, slightly lobed, not much more than a quarter of an inch across on short petioles, and of bright green colour. This dense carpet is profusely studded with drooping flowers either blue or white in colour. The fact that it will flourish anywhere has made it a great favourite either for edging, rockwork, or border, and it certainly deserves its popularity. It is a native of South Europe.

C. carpathica (Jacq.) (see illustration fig. 2) is a native of Hungary and adjacent districts, and as much a favourite as the last named variety (cæspitosa). The large deep blue or white flowers are very showy, and last for a considerable time. The flowers are often more than 1½ inches in diameter, and are usually 8 inches to 10 inches in height. The leaves are 1 inch to 1½ inches long and three-quarters of an inch to 1 inch wide, cordate, involute, coarsely dentated, and deeply undulated. In the border large groups of this Bellflower are most effective. If planted in the rock garden it is best arranged in masses not on, but between the rocks, or forming a carpet between taller plants in the background. The white form (C. carpathica alba) is also most effective and equally easy of cultivation.

C. carpathica pelviformis (Lam.) is a sub-variety distinguished by its very large pale lilac or heliotrope-coloured blossoms. The flowers are fragrant, often as much as 2 inches across, somewhat flat or saucer-shaped and appear in loose panicles. The leaves are ovate or cordate, toothed at the margin. Though a native of the island of Crete, it does very well in Great Britain and Ireland.

C. c. turbinata (Schott) is another sub-variety of C. carpathica with flowers more bell-shaped, turbinate, dwarfer and more compact. The flowers are often 2 inches across and of a deep purplish blue. The leaves are cordate-lanceolate with crenate-serrate margin. It is an excellent rock plant, and as it is one of the easiest of cultivation, it does also remarkably well in the front part of an ordinary border. It grows seldom more than 6 inches in height.

C. c turbinata pallida, with flowers of a pale blue colour, but in other respects similar to the former, is a very effective sub-species, though rarer in cultivation.

C. c. t. G. F. Wilson (see illustration fig. 3).—This interesting hybrid was the result of a cross between C. c. turbinata and C. pulla, and is certainly very distinct, combining the large bell-shaped flowers of C. c. turbinata with the splendid dark colour of C. pulla. It is very compact and dwarf in habit, and hence an excellent rock plant, well known to lovers of hardy plants. The leaves are small, very hairy, ovate in shape, with a crenate-serrate margin.

C. Elatines (Linn.) is found wild in Italy and Austria, and though somewhat rare in English gardens, is an excellent variety for the rock garden on account of its dwarf, compact growth. The flowers are deep blue, borne in a panicled raceme not more than 5 inches or 6 inches high. The cordate leaves are dentate at the margin. It does well in light stony soil.

C. fragilis (Cyrill.).—This is another Italian species, known also as C. Barelieri (Presl.). It would probably require protection in the north of England or Scotland, but here in Devon it is, as a rule, perfectly hardy. Its long trailing shoots are covered with rather pale purplish blue flowers with white centre. The leaves are ovate and deeply lobed. On account of its trailing habit it makes an excellent basket plant for suspending from the roof of a verandah, and is also most suitable for window boxes or for covering prominent stones in the rock garden.

C. garganica (Tenore) (see illustration fig. 4).—This is a native of Italy and Greece, and a most valuable addition to our garden flowers either for rockwork or border. As the illustration shows, it is very free-flowering, and the flowers flat, with the lobes of the corolla so widely spread as to appear almost like little stars. The blooms are pale blue with whitish centre, and last throughout June and July. The leaves are deep green and glossy, on petioles about 1 inch in length; they are cordate or reniform when flattened, but biserrate, deeply lobed and involute. It will do well on rockwork in a half-shady position.

C. g. hirsuta (see illustration fig. 5).—This handsome sub-variety is also of Italian origin, and, though the small illustration might imply that it is smaller than the last named (C. garganica), it is really more vigorous than that variety. It bears in June numerous long racemes of twelve to fifteen flowers each, very similar to those of C. garganica, but a trifle larger. The leaves also are larger and quite tomentose, which among hardy plants generally is a sure sign of their loving a position fully exposed to the sun. For sunny rock gardens there are few plants to equal this one, but it must of course be planted where it cannot overgrow smaller subjects.

C. haylodgensis (Hort.) is an interesting hybrid, raised at Hay Lodge, Edinburgh, from a cross between C. carpathica and C. pusilla. I have only seen it flowering at Kew, but it appears to be a good thing and flowered abundantly on the rockwork. The colour is light blue and the flowers are somewhat saucer-shaped. The plant grows 6 inches to 8 inches high and lasts in bloom till August. The radical leaves are orbicular, while the cauline ones are ovate, with a dentate margin.

C. isophylla (Moretti).—This native of North Italy also bears the name of C. floribunda (Viv.), and its white variety (C. i. alba) is illustrated in the engraving fig. 6. C. isophylla has a cymose inflorescence and pale blue, flat, saucer-shaped flowers more than 1 inch in diameter. The broad lobes of the corolla are very obtuse, and another



Campanula carpathica. (*Fig.* 2.)



Campanula isophylla alba. (*Fig.* 6.)



Campanula barbata. (*Fig.* 11.)



Campanula turbinata G. F. Wilson. (*Fig.* 3.)



Campanula cæspitosa. (*Fig.* 1.)



Campanula Portenschlagiana. (*Fig.* 8.)



Campanula Loreyi. (*Fig.* 7.)



Campanula garganica hirsuta. (*Fig.* 5.)



Campanula pusilla. (*Fig.* 9.)

conspicuous feature is the style, which is comparatively large and projects quite an inch from the centre of the flower. The leaves have petioles 1 inch to 2 inches long; they are involute, cordate, slightly hairy and coarsely serrated at the edge. It is not found in cultivation quite so often as its white variety (here illustrated), but both are excellent rock plants or basket plants, and their pendent shoots laden with flowers should always have a position that would show them off to advantage. Their cultivation presents no difficulties whatever, and I have seen them do equally well in a sunny or in a half-shady position.

C. Loreyi (Pollini) (syn., C. ramosissima, Host.) (see illustration fig. 7).—Unfortunately this interesting species from Italy and the Austrian Alps is only annual, but it is quite worthy of a place among dwarf plants, and might be sown in the open border in spring. It is from 6 inches to 12 inches high and produces tubular flowers of rather inflated appearance. These are almost white at the base, but are shaded towards the apex of the lobes with blue and violet. The stems are long and erect and have lanceolate and linear leaves.

C. mollis (Linn.).—Though the native home of this Bellflower is on the shores of the Mediterranean, it has nevertheless proved itself to be perfectly hardy in this country and stood the test of the last severe winter. It is most useful for rockwork or border and easy of cultivation. The flowers are of a dark purplish blue and very freely produced during May and June. The plant is from 6 inches to 8 inches high and soon forms a compact spreading carpet of glossy green leaves, which are ornamental, even at midwinter, by their brightness of colour. The leaves are on rather long petioles, and when flattened out appear reniform, but they are involute to such an extent as to appear almost funnel-shaped. The margins of the leaves are bi-serrate and very deeply cut.

C. nitida (? Soland), also known as C. planiflora, is an American species and a decided acquisition. It is fit to occupy some choice sunny corner in the rock garden. The flowers are blue and very flat, saucer-shaped, almost rotate. There is also a white variety, viz., C. nitida alba, the flowers of which remind one of Nierembergia rivularis, but they are more waxy in appearance. Both varieties are of very slow growth, dwarf and compact. The leaves are arranged in whorls, forming very dark green shining rosettes, the individual leaves being about 1½ inches long and a quarter of an inch wide, very leathery in substance and crenate, slightly undulating at the margin.

C. Portenschlagiana (Roem. and Schult.), (see illustration fig. 8).—This is a native of Dalmatia, and is synonymous with C. muralis (Portenschl.). It is a most useful plant for the quick formation of a dense dwarf carpet, and is suitable for almost any position. It grows from 6 inches to 8 inches high, and has a bell-shaped corolla about half an inch in length, and a diameter of three-quarters of an inch from lobe to lobe. The lobes are recurved and rather obtuse. It flowers most abundantly during the whole of the summer, the blossoms being disposed in panicled racemes. The radical leaves are reniform, smooth dark green, and more than an inch in diameter; the cauline leaves are smaller, and have coarsely serrated edges. There is also a more robust variety named C. P. major.

C. pulla (Linn.).—This native of South-Eastern Europe is easily distinguished from all other Hairbells by its very dark colour, the flowers being of an intense dark purple-blue, almost approaching to black. It loves light sandy soil, and is an excellent rock plant, growing only 4 inches or 5 inches in height. The leaves measure less than a quarter of an inch across, and the indentations at the margin are very slightly crenate and dentate.

C. pusilla (Haenke), (see illustration fig 9).—By many botanists this variety is considered identical with C. pumila, and though a difference undoubtedly exists, it is questionable whether that difference justifies the retaining of a separate name. The C. pusilla here illustrated is an excellent rock plant, and does well in gritty soil. The flowers are blue, and appear three to five on a stem with a campanulate corolla little more than half an inch in length. The radical leaves are orbicular, half an inch in diameter, serrate and slightly involute on petioles about 1 inch in length. The cauline leaves are linear and lanceolate.

C. rotundifolia (Linn.).—This British species is very widely distributed, not only in Great Britain, but also in most European countries, and even in Africa, North America, and parts of Asia. It varies according to situation from 6 inches to 18 inches in height, and has drooping flowers of a blue colour. The lobes of the campanulate corolla are recurved and rather short. The radical leaves are ovate or cordate, sometimes orbicular with a crenate margin. The cauline leaves are linear and almost entire. It is well worthy of a place in the rougher part of the rock garden or border. There is also a white form.

C. rotundifolia Hosti is a handsome subvariety of the former, distinguished by larger flowers of a deeper blue and by stronger wiry flower-stems.

C. r. soldanellæflora is another very distinct form with semi-double blue flowers split into many narrow divisions, which remind one of the fringe of a Soldanella.

C. Scheuchzeri (Vill.).—This variety is, according to Garke's "Flora of North and Central Germany," considered to be only another variation of C. rotundifolia, and has from one to five large flowers of a deeper bell shape than the British species and with lanceolate leaves crenate at the margin. It grows about 6 inches high and is a native of South Europe. On rockwork and in borders it is effective and of the easiest cultivation. There is also a white variety under the name of C. Scheuchzeri alba.

Section III.—Campanulas of medium size, mostly suitable for Borders.

It is somewhat difficult to draw anything like a hard and fast line where the sizes of plants are concerned, for the reason that even the same species will often vary in size if planted in another locality or under different conditions. The term "plants of medium size" is therefore rather indefinite, but I have used it for practical reasons, and the Campanulas mentioned under this section must be understood to mean plants generally varying from 9 inches to 18 inches in height, and only under exceptionally favourable circumstances exceeding a height of 2 feet. The Hairbells of this section are such as would not require the preparation of narrow crevices or any special treatment, but would grow in ordinary soil in the herbaceous border. It does not follow that they should not also be used in the rock garden, but where used for that purpose their proper place would be in large or small batches between the groups of rock rather than on the rocks themselves. All the varieties here mentioned will be found far more effective when they are combined together in the formation of large groups than when dotted about singly.

Campanula abietina (Griseb.) is seldom more than 12 inches to 15 inches in height, and the large purplish blue flowers are borne in great profusion on slender, but wiry stems. The flowers are further distinguished from other varieties by being distinctly shaded with reddish purple. It is free-flowering and an excellent border plant.

C. Burghalti (Hort.).—This is a very handsome hybrid form of C. Van Houttei (Carr.), and, though little known at present, it is sure to become popular. It grows from 18 inches to 2 feet in height, and is most distinct. The flowers are disposed in strong racemes of from six to eight flowers each; they are axillary, with pedicels about 1 inch in length, and bearing two short bracteoles. The flower-buds are dark purple, but the pendent flowers when expanded are of a very distinct pale lilac colour. Each individual corolla is fully 2½ inches in length and about three quarters of an inch in diameter, the tubular or cylindrical part of the corolla alone being quite 2 inches long. The lobes of the corolla are not recurved, but in a line with the tube; the interior of the corolla is covered with long silky hair to such an extent as to have quite a shaggy appearance. The style is very large, tapering towards the bottom, and covered with short hairs. The calyx-lobes are about 1 inch in length. The radical leaves are about 3 inches in diameter and remind one of those of the Nettle; they are wrinkled, cordate in shape, with a crenate margin, and covered with hair on both sides. Their petioles are 3 inches to 4 inches in length. The cauline leaves are sessile, or have their petioles expanded into a narrow blade; they are alternate at intervals of about 2 inches, and, like the radical leaves, rough to the touch, owing to a covering of bristly hairs. Towards the top the cauline leaves become much narrower. Flowering time from early August to September.

C. glomerata dahurica (syn., C. speciosa, Hornem.) is one of the handsomest of early-flowering Campanulas. It flowers throughout May and June, growing about 15 inches or 18 inches high, and bearing terminal heads of numerous large tubular flowers of the deepest purple colour. The leaves are ovate or cordate, 1½ inches to 3 inches long, and 1 inch to 2 inches wide, covered with very short, stiff hairs, especially on the upper side, which has a rough surface. The petioles are a little longer than the blades, and in the case of young leaves striped with red. The margins are crenate. It is one of the most desirable plants either for border or rock garden, and is of the easiest cultivation.

C. grandis (Fisch.) (syn., C. latiloba, De C.).—This is a very fine form for the border, where it will rapidly form a thick carpet of sessile, lanceolate leaves, throwing up flower-stems about 18 inches high, covered with large pale violet-blue flowers often 2 inches in diameter. There is also a very good white form under the name of C. grandis alba.

C. Hendersoni (Hort.) is generally considered to be a form of C. carpathica turbinata, but it is certainly much more robust than that variety, and grows a foot or more in height. The dark blue flowers, each 1½ inches to 2 inches in diameter, are borne in short racemes of from six to nine flowers each. The lobes of the corolla are very obtuse, almost hemispherical. The stems are very thick, strong and wiry. The leaves are on petioles 1 inch to 1½ inches long, folded upwards through the middle, so as to appear almost conduplicate. They are ovate and ovate-cordate, 1⅓ inches long and about three-quarters of an inch wide, slightly hairy on both sides and with serrated margins.

C. macrostyla (Boiss.).—This grows about 18 inches in height, and has large flat, purple flowers beautifully veined, and bearing in the centre the very large peculiar-shaped style from which the plant takes its name. It is, unfortunately, however, only of annual duration.

C. rhomboidalis (Linn.).—This is a very fine variety and well adapted for the rock garden or the border; it grows about 12 inches high and has blue flowers, which appear in July. Almost finer than the type is the sub-variety Campanula rhomboidalis alba, with pure white flowers. This has a large corolla of hemispherical shape, measuring more in width than in length. The style and stamens are very short and inconspicuous. The flowers are disposed eight or ten on a stem in an almost corymbose raceme, with the lower pedicels 2½ inches to 3 inches long, while those of the upper part of the raceme measure only about an inch. All pedicels have one or more bracteoles. The lobes of the corolla are slightly recurved. The radical leaves are sessile, linear-lanceolate, slightly crenate, 2 inches in length and little more than an eighth of an inch in width; towards the top of the stem the leaves become gradually narrow, quite linear or acicular, with margins entire. It is altogether a most

desirable species, but as its leaves and stems die down soon after flowering (July and August) it should be planted close to an evergreen species.

C. sarmatica (Ker-Gawl)—also known as C. gummifera (Wild.)—is a native of the Caucasus, and grows from 1 foot to 2 feet high, with light blue, drooping flowers disposed in a long, loose raceme. It flowers during July and August. Its leaves are of a very dark green, wrinkled and leathery, of uniform and ovate-cordate shape, crenated at the margin and only slightly involute.

C. thyrsoidea (Linn.) grows about 18 inches high and is distinguished by its creamy yellow or sulphur-coloured flowers, arranged in a dense pyramidal spike. Unfortunately it is only biennial. The radical leaves are sessile, spathulate, about 2½ inches long and three-quarters of an inch wide, arranged in a rosette flat on the ground. The serration at the margin is very minute and the leaves appear almost entire. The cauline leaves are linear and lanceolate, and, like the radical ones, covered with long hairs at the margin.

C. Van Houttei (Carr.).—This is one of our finest border Campanulas, blooming in July and August. It has large, pendent, tubular flowers, of a deep dark blue colour, but is in other respects scarcely to be distinguished from its fine hybrid, C. Burghalti, which has been already described.

C. Vidali (Wats.). — This handsome species from the Azores has beautiful white, wax-like flowers on stems about 18 inches to 2 feet long, and leaves more like a Mesembryanthemum than a Campanula. Though undoubtedly a rare and handsome species, it cannot be considered a hardy plant except during the summer months, and should be wintered in a frame or greenhouse. A full description appeared in The Garden of August 24, page 136.

Section IV.—Tall Campanulas for borders or for planting as isolated specimens.

The Hairbells mentioned under this section are the giants of the family, varying in height from 2 feet to 5 feet, or even more. In planting they are best arranged in groups in the back part of the herbaceous border, but some of the rarest and handsomest kinds might with advantage be introduced as isolated specimens, either into a border carpeted with smaller flowers or by themselves on the lawn, or into places in the rock garden where it is desirable to emphasise a bold effect.

Campanula bononiensis (Linn.).—Of this fine border plant there are two varieties, one with bluish violet flowers, the other with pure white flowers. The plant is very widely distributed in Europe, and grows about 2½ feet in height. The flowers are arranged on a long, narrow, pyramidal spike, about 2 feet in length, and bear from sixty to a hundred small flowers, with acutely-lobed corollas scarcely more than an inch in length. The leaves are alternate, sessile, amplexicaul, ovate-lanceolate, serrated at the margin.

C. lactiflora (Bieb.), also known as C. celtidifolia (Boiss.), is a native of the Caucasus and Siberia, and attains in our gardens a height varying from 2½ feet to 5 feet. It is a first-class border perennial, with pale blue flowers arranged in loose panicles, and flowers from July to September. The leaves are ovate-lanceolate.

C. latifolia (Linn.).—This is a stately native species, growing 3 feet or 4 feet high, with large blue or white flowers. The flowers are axillary and have large leafy bracts, which give the whole raceme a very leafy appearance. The lobes of the corolla are acuminate. The leaves are large, many being quite 6 inches long, oblong, ovate, bi-serrate, covered with soft hairs. Two fine subvarieties are C. latifolia eriocarpa (Bieb.) and C. l. macrantha; the latter has larger flowers than the type, and all are excellent border plants.

C. Medium (Linn.) (see illustration fig. 10).—This is our old familiar friend the Canterbury Bell, so well known to everybody as to need no further description. The illustration represents the Hose-in-hose or Cup and Saucer variety. There are several double and semi-double forms, but as the plant is only biennial it is necessary to keep up a fresh supply of young plants, which is easily managed by sowing in pots or pans in early spring and planting out when strong enough. The plants will then flower the following season, and must be reckoned among our showiest border subjects.

C. persicifolia (Linn.) (see illustration fig. 12).—This handsome Bellflower is sometimes found naturalised in woods in various parts of Great Britain, but the cultivated form is very much finer in all its parts. The large blue flowers are borne in a loose raceme 2 feet to 3 feet high, and are blue or white, excellent for cutting. The leaves are obtuse, spathulate, 3 inches to 4 inches in length, leathery, and slightly serrated. Of this Campanula we have a great many sub-varieties, as C. p. flore-pleno with double flowers, C. p. alba (see illustration), C. p. alba coronata, with semi-double flowers, C. p. alba fl.-pl., with magnificent double flowers excellent for cutting. Of all the Campanulas none can surpass the following:—

C. persicifolia alba grandiflora.—This is the queen of Hairbells, a truly noble plant fit for growing as an isolated specimen in the rock garden or in groups in the border. It is like the C. persicifolia alba here illustrated, but the pure white flowers are much larger, and often measure 2½ inches across. It is excellent for cutting, too, and second to no other hardy perennial.

C. pyramidalis (Linn.) (see illustration fig. 13) is the giant among Campanulas, attaining often a height of 5 feet to 7 feet. Young plants give the finest flowers, and it is therefore best treated as a biennial. Though somewhat stiff in appearance it is an excellent border plant, and also well suited for being grown in pots to decorate verandahs, conservatories, &c. It is one of our oldest hardy flowers and most effective. There are several shades of colour, from pure white to blue. The flowers are densely crowded in long pyramidal spikes and the leaves are large, ovate. The plant prefers a slightly shaded position to one fully exposed.

F. W. Meyer.
Exeter.

Eritrichiums.—About twenty years ago the late Mr. James Backhouse received several species of Eritrichium from N. America, all of which, with one exception, proved to be very coarse, weedy things. The only one that was in any degree worth growing was E. aretioides. Has any reader ever come across this or any other American species that is worth anything?—W. M.

Colour in Carnations.—Possibly one of the most vexatious items, particularly in so far as appertains to new plants, is the catalogue descriptions of their colours. In not a few instances some popular shade of colour has never existed beyond the imagination of the raiser or introducer. Whether this is the result of colour blindness or ignorance matters little, or even if it is design the case is much the same, and in the end only tends to make possible purchasers of new plants the more cautious, for while one may pardon in a measure exaggerated colour descriptions when any particular shade exists, it really can serve no useful purpose to attach colours which do not exist at all. For instance, at page 218 of The Garden the American Carnation William Scott is described as pink, which of all shades in Carnations is perhaps the most sought after. Now, I had always regarded the well-known Miss Joliffe as having flowers of a good representative pink shade, and if this is really so, then those of William Scott have certainly nothing to do with this shade at all. I do not know what precise shade an artist such as Mr. Moon would give to this flower, but it appears to me a rose-magenta, a colour exceedingly common among border kinds. Then again, Daybreak is called a light pink, whereas this kind has more white in it than even the old blush Malmaison. Daybreak also bursts the pod very badly. Apart from the colour of William Scott the plant has a gross habit of growth, while the flowers are exceedingly common-looking, and the great saw-edged petals ar not at all pleasing. For shades of pink such as Miss Joliffe, Reginald Godfrey and others have, there is abundant room, and while such are pro curable, the florists, who virtually control the cut flower trade, will not take kindly to such as William Scott. Though a larger flower than Miss Joliffe, it lacks the exceeding beauty and refinement of this variety. Indeed, the latter, where it can yet be grown, has scarcely any equal either for quality of bloom, freedom and continuity of producing its flowers, or its exquisite shade. The great majority of growers, however, fail to manage it now, and the constitution appears gone. Even growers who have been accustomed to have it by the ten thousand have, quite failed with it during the past few years. In its bushy habit and perfect calyx it is an ideal Carnation, and of such a standard only very few ever come to the front. Some of the seedlings raised from this variety, carefully fertilised with its own pollen and protected afterwards, resulted in scarlets and brick-red shades. Nothing to compare with the parent, so far as I am aware, has been raised from it.—E. J.

Stove and Greenhouse.

WINTER-BLOOMING CARNATIONS.

The information given on these is often very misleading, especially to those who are forming a collection, so many varieties being named that are not Tree Carnations at all and will not flower in winter except by mere chance. As a rule Carnations are grown in pots for cutting, and any variety that only produces a few blooms is not worth the labour and house room. Since I formed the collection here I have tried and discarded many so-called good varieties sent out with grand names, but utterly useless where the flower basket has to be filled in mid-winter. A few years ago a good deal was written in praise of seedling Carnations for winter work, and I was induced to try them, but I grew none a second time, as not one out of a whole batch, and that obtained from an expensive packet of seed, was comparable to the old standard sorts, such as Miss Joliffe, Alégatiere, Winter Cheer and La Neige. The last comparatively new Tree is the greatest advance that has been made for many years. I still have Mlle. Carle, but shall not grow it after this season, La Neige being so much more free in growth and flowering and a non-splitter. I do not think Uriah Pike will prove itself a free winter bloomer, although it may flower well in spring. My plants are extra large and robust with abundance of side shoots, which have been well exposed to the sun, but at present only a solitary bloom here and there is visible, whereas every plant of the old sorts is covered with blooms and buds in every stage of development. Of course, a good spring bloomer is valuable, as it keeps up the supply after other sorts are on the wane, so that should Uriah Pike prove itself to be this, it will be well worth growing in pots, as its colour and fragrance are very beautiful. Our plants look most promising, having just been housed in a rather lofty structure on a stage close to the roof-glass, air both at the top and front ventilators being admitted day and night. It is a good plan to fumigate the plants immediately they are taken in, as the somewhat drier atmosphere is almost sure to bring greenfly, and this must not be allowed to make headway. An intermediate temperature recommended by some encourages this pest and causes a weakly, unproductive growth. So long as actual frost is excluded the plants will be safe. In regard to feeding, I give no manure water during summer growth, but water twice weekly

in winter when the plants are taxed by blooming with diluted farmyard liquid the colour of pale ale. During October the plants are gently dewed over with the syringe on fine sunny days and the stage and floors kept moist. During November, December and January draught is avoided, as it soon produces mildew. Last January I layered a number of strong shoots of Miss Joliffe and La Neige on the plants as they stood in the house, putting a little Moss in the incision to keep it open and also mossing the stem round; these rooted freely, the young rootlets showing themselves through the Moss at the end of February. They were detached and potted, Moss and all, into small pots and grown on through the summer. They are now very large bushes, twice the size of those struck from cuttings in spring in the usual way.

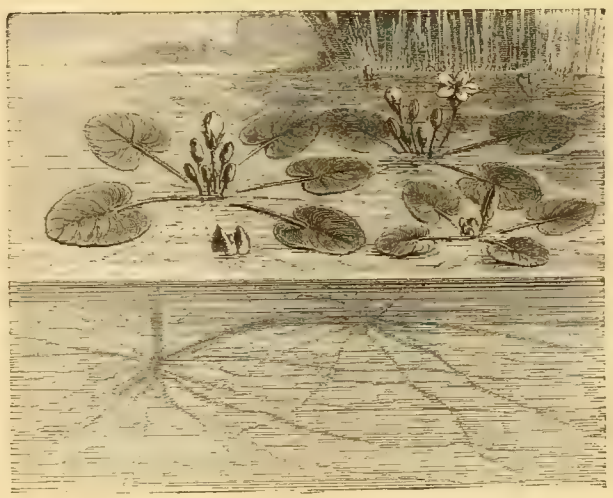
J. C.

DWARF POINSETTIAS.

Mention is made at page 265 of the difficulty often experienced in obtaining dwarf plants of the above for vases and similar work, and a method of overcoming the difficulty is also alluded to. This, however, is virtually spoiling a large plant to make a small one. Here is another way of obtaining dwarf plants for the purpose named by "J. C.," and one which means simply the more complete utilisation of old stock plants. Many gardeners fail to root Poinsettias by growing sappy cuttings in too much heat. To avoid this, in May, when the usual stock of these plants has been some time rooted, place the old stock plants either in cold frames or in the open if weather permits. In the frames, however, the old plants will presently produce short, serviceable cuttings, or, if there is any fear in this respect, keep the plants in a slightly warmer place till 3 inches of fresh growth have been made. Now remove to a pit or frame, and keep them quite on the dry side at the root for the first fortnight. By giving air increasingly day by day the lights may be left off altogether and the plants subjected to full light. A few days of this treatment and you have short, sturdy cuttings, totally distinct from the soft, sappy ones produced in greater heat and moisture. Secure these cuttings with a heel attached when 4 inches long, and insert singly in small pots. In any gentle bottom heat, as, for example, a manure frame, such cuttings root quickly and with greater certainty than those produced in heat. When well rooted and gradually hardened off the plants should be grown in the open in full sun, and at all times given moderate supplies of water at the root. Thus grown and fully exposed, growth is somewhat slow, and short-jointed, well-ripened wood resulting. And the result of well-ripened wood is known to all. From the cutting pot the young plants should be shifted into 4½-inch pots, and in these allowed to develop their heads of bloom. The system throughout, in fact, is simply one of cool culture combined with late propagation, under which the plants usually attain about 1 foot high, while the heads of coloured leaves are in size proportionate. Plants of this size are decidedly more serviceable for decoration generally, whether employed in baskets or in a cut state. One great advantage of plants coolly grown is that they suffer less when used for decoration than those grown in much warmer structures. These latter are usually unnecessarily tall for many places and positions, and gardeners would do well to grow a batch of dwarf plants as a reserve for decoration generally. I am aware that the cool system is in vogue in private gardens and nurseries alike. Upwards of fifteen years since I saw a large number thus grown in a nobleman's garden in Hertfordshire, and quite recently in the nurseries of Messrs. Heath and Son, of Cheltenham, I saw 200 or 300 of these dwarf plants. Indeed, the Messrs. Heath, who are themselves large floral decorators, have made these dwarf plants quite a feature for years past, and during the past summer the plants were growing quite exposed in the open, where they remain till cooler nights render it necessary to cover the plants with lights. These plants, notwithstanding the pots were quite 6 inches or 8 inches apart and the great heat experienced, carried foliage to the pots, a proof that they were quite happy under the treatment.

E. J.

Swainsonia Veitchi.—No one could scarcely pass this elegant plant when in flower without expressing admiration for it. It is a member of the Leguminosæ, and the majority of the species have coloured flowers. In the plant under notice the flowers are exquisitely pure in their whiteness, and therefore very chaste and beautiful. When the plants are established and well grown, they are rarely to be seen without flowers upon them. The spikes of pure white blossom are enhanced in their value by the elegant foliage of the plant. It is one of those easily grown greenhouse subjects that thrives with but little care, and where large and cool conservatories exist, would form a capital subject for planting out. In such places its elegant foliage and pure white spikes of blossom would be much esteemed. Under pot culture the plant gives but little trouble, succeeding best in a mixture of peat and loam similar to that usually given to Genistas and such like plants. All the kinds may be readily increased at the present time by cuttings inserted in sandy soil and covered by a bell-glass. Cuttings 3 inches or 4 inches long and with a heel attached are the best. By pinching the points of the shoots twice during the season, nice bushy plants result, and in this way a few specimens may be prepared for autumn flowering. In summer the older bushes may with advantage be planted in the open garden, where they would yield a useful supply of their pleasing and fragrant blossoms.—E. J.



Villarsia nymphæoides, showing growth.

Aralia Veitchi.—The slender-growing specimens seen at exhibitions in collections of table plants can hardly be identified with the vigorous-growing, large-leaved examples occasionally seen when planted out in suitable soil. I find it is also inclined to lose the very slender habit even when grown in pots. To have plants of a suitable size for table decoration it is necessary to propagate at least annually. Grafting seems to be the only safe method of keeping up a stock. Aralia reticulata is the best stock, and this is easily propagated from cuttings. The grafting may be done at almost any season of the year, though I find it is best not to do it during the very hottest weather. If the top of a fair-sized plant is taken off, the same plant will break out and give further stock later on, but it is very slow work to use anything but tops or the lower part of the stem after the lateral shoots have started. All of the slender-growing Aralias should be potted in rather light peaty compost and good drainage should be given. Although usually grown in the stove, I have seen plants doing well in an ordinary greenhouse. Of course it would be fatal to take them from the stove and expose them to a low temperature all at once, but if gradually hardened off they will stand well where the thermometer does not fall much below 40° F., and will be more serviceable when required for table decoration or other purposes where they would have to be exposed. At most of the Chrysanthemum shows a class is provided for table plants, and in almost every successful collection one of the Aralias will be found.—H.

Garden Flora.

PLATE 1036.

VILLARSIA NYMPHÆOIDES.

(with a coloured plate.*)

The round-leaved Buckbean is a very pretty little native aquatic plant, which is not uncommon in the reaches of the Thames from Richmond upwards. It is said to be truly wild only in the southern counties, although it is to be met with in the north, where, however, it has no doubt been introduced. It is plentiful in the moat between the old deer park at Richmond and the towing-path of the Thames, as many British botanists know, this being the source of a great many specimens in herbaria, the plant being one of those rare natives which are so dear to the collector. Mr. Moon's picture was prepared from plants that had been transferred from the park moat to the tank for aquatics at Kew, where also it is established in the lake.

Considering the beauty of the flowers and the ease with which the plant may be established in gardens, it is surprising that so little has been done with it horticulturally. In July, August, and September I have seen the moat at Richmond studded over with thousands of the bright yellow star-like flowers, making a picture fit for the choicest of water gardens. The roots grow in mud a foot or two below the surface of the water, producing slender branching stems with alternate leaves, and other floating stems upon which the leaves are opposite and which are terminated by a cluster of flowers. The leaves are like those of a Nymphæa in shape, but much smaller and thicker, and they generally have a few rust-red blotches on the upper surface. The stalks of the leaves are long or short according to the depth of the water. The flower-stems are erect, 1 inch to 3 inches long, each bearing a single flower an inch in diameter and formed of five spreading petals, which have thin crisp margins and are coloured bright yellow. The fruit matures freely, and good seeds may be obtained in late autumn.

Whilst some botanists call this plant by the name adopted here, others refer it to Limnanthemum, and it has also been placed with the Bogbean proper, under Menyanthes. It resembles Limnanthemum more than the other two, although there is a close family resem

* Drawn for The Garden in the Royal Garden Kew, by H. G. Moon. Lithographed and printed Messrs. Joseph Mansell, Limited.



VILLARSIA NYMPHÆOIDES.

blance between the three of them. The distribution of the species here figured extends from West and Central Europe to China, the genus Limnanthemum being as widely distributed as is Nymphæa, viz., throughout the tropical and temperate zones. There are fourteen species, all aquatic in habit, some of them being much larger than our native species. For instance, L. indicum, common throughout India, has leaves 1 foot in diameter and whitish flowers; L. Humboldtianum, a South American species, has leaves 6 inches across and large, stellate, fringed flowers nearly 2 inches across, white, with a yellow eye; and L. calthæfolium, an Australian species, has spikes of flowers 7 feet or 8 feet high. So far as I know, none of these are in cultivation in Europe. Collectors might do worse than send home seeds of these and similar interesting ornamental aquatics, for it would seem as though the water garden is likely soon to receive much more attention in this country than it has yet done. W. W.

The Week's Work.

KITCHEN GARDEN.

Jerusalem Artichokes.—As a rule, these are not in demand until a few sharp frosts have occurred, it being generally supposed that by the freezing the flavour is improved. Where required, however, they may now be lifted, the smaller tubers being laid in ashes or covered with leaf-mould, to be used as seed in the spring. Artichokes retain their quality better if left in the ground and dug as required. The Chinese Artichoke (Stachys tuberifera) is a favourite with many, and should be lifted by the first week in November and stored in the same way as Beetroot.

Beetroot.—The Turnip-rooted variety and the earliest sown rows of the long-rooted section should now be taken up, sorted, and removed to the root shed. It is a good plan to size them, keeping the large, coarser portion of the crop by itself for immediate use. The medium-sized roots are what are most appreciated for the salad bowl or for slicing up and serving cold. When lifting be careful not to injure the tap root, and when cleaning avoid scraping the skin, this causing bleeding. I do not advise cutting the tops off close to the crown, rather leave a fair length of leaf-stalk, and when storing arrange the roots in layers, with a layer of moist soil between. Where it is desirable to save roots of any choice strain for seed next year, the best plan is to select the required number of medium-sized, well-shaped roots and to clamp them in the same way as Potatoes, covering them with a good thickness of dry Bracken, and finally with soil, letting in a Seakale pot at the top of the clamp for the admission of air in mild weather. During frost the pot should be stopped up with Fern or straw. Where storehouse room is short, every other row of roots may be lifted and the others earthed up with soil to protect them from frost. Unless very severe, they will take no harm, especially if a covering of litter is given during frost.

Endive.—Attention must now be given to this important salad, as in all large establishments it will soon be preferred to Lettuce, at any rate as a change. When the delicate Moss-curled variety is grown for early use it should now be blanched, as much wet soon rots the centres. If a spare frame can be placed over the plants where they stand, they can be shielded from rain, and blanching accomplished by covering the lights with garden mats or even Bracken, admitting a little air by tilting at the back of the frame, but allowing the mats to fall down over the aperture. Where Lettuce has been scarce and no frames at hand, I have seen this early Endive quickly blanched in the border by laying some large light slates over the plants. The earliest and largest plants of the Broad-leaved Batavian must now be lifted and placed in frames, or, better still, pits, as in the latter better drainage is secured and the plants are less liable to damp off in foggy weather. In the case of extra large spreading plants it is best to tie up the foliage before starting to lift, so as to prevent the soil from falling into the centres. Thrust the spade in on both sides of the plants and lift carefully so as to get as much soil with the balls as possible. Make a slight trench sufficiently deep to contain the roots and cover with soil from the next trench, pressing it firmly round each plant with the hands. Planting completed, give a gentle watering through a rose to settle the soil firmly, after which expose freely in fine weather, drawing up and tilting the lights during rainy periods. Allow plenty of room between the rows and individual plants, as a free circulation of air is essential to ward off damp and decay. Sometimes Endive is planted along the front of orchard houses, being first laid on the hard border and then covered with dry soil, receiving a good watering afterwards. Here, with the admission of plenty of front air, the plants winter well and are easily got at during hard or snowy weather. Sometimes plants resulting from a late sowing may be safely wintered at the foot of a warm south wall, being covered with dry leaves if frost necessitates it. I find Fraser's Improved Broad-leaved the best all-round Endive, and less liable to run to seed in spring. The flavour also is sweet and nutty.

Cabbages in frames.—Small plants of August sowings of spring Cabbage should now be pricked out into frames with a view to protecting them through the winter. The smaller the plants the better, provided they have perfect centres and healthy roots. Brown Cos Lettuce should also be served in the same way, as the recent great heat induced a free and sappy growth, which would be easily injured by frost. Stir soot freely into the soil in the frames, as slugs are generally troublesome, and during wet weather draw the lights over the plants and sprinkle wood ashes over the surface, or damp and decay will be likely to work sad havoc.

Lifting Horn Carrots.—Although Carrots are not easily injured by frost, it is advisable to lift all crops of this root as they mature, so that the ground may be turned up. As there is always a percentage of the roots either cracked or deformed, it is well to separate these from the rest, as in the case of Beetroot. They can then be used for soup, the better-shaped roots being reserved for more important purposes. It is not imperative to give Carrots shed room, as they keep well enough if laid in soil, ashes, or sand behind north walls, where they can be covered with litter in case of very hard weather. The lifting at present will be confined to the Horn section, the intermediate and long varieties being best left in the ground for some time longer. If lifted too soon the roots shrivel early in spring. Late-sown beds of Carrots intended to afford young tender roots for soups in autumn and early winter, whether in frames or the open ground, must be kept quite free from weeds and rubbish.

Turnips.—Breadths of Chirk Castle sown for a supply during winter will now have swelled to a good size, and may be encouraged to become larger by one more broadcast sprinkling of guano or fish manure. Later sowings with bulbs only the size of Walnuts need frequent stirring with the Dutch hoe, as with a fair winter these roots will continue to grow till the new year, being then most useful, besides supplying tender tops. Any full-grown bulbs of Golden Ball should be lifted and laid in ashes in some convenient corner, as if left in the ground, splitting and decay are sure to follow.

Salsafy and Scorzonera.—It is too soon yet to lift these, as healthy roots on good ground will grow for some time to come. Many early-sown plants have this season owing to the drought run to seed, and many in successional batches are showing a tendency to do so. It is almost waste of time and ground to sow early, as in nine cases out of ten bolting ensues. It is not too late to give another good soaking of farmyard liquid of good strength to increase the size of the roots, as thin, wiry roots possess very little flavour. The new Russian Scorzonera is a great improvement on the old variety.

Routine work.—In many places copious rains have fallen of late. This will have produced a fresh colony of weeds amongst late-planted crops. As soon as a fine day favours it, the Dutch hoe and rake must be put through once more. The rake is necessary, as it is seldom that weeds simply hoed up die after this date, but grow away again after the first shower. Any rows of late Peas, Scarlet Runners, or Marrow growths should be cleared off without delay if only for appearance sake. Choose a fine day for giving another sprinkling of salt to the walks in the kitchen garden. J. Crawford.

FRUIT HOUSES.

Figs in pots.—The earliest crop of Figs is best obtained from pot trees or those in restricted borders. Many have not room for permanent trees, and for hard forcing pot plants are always reliable, given good culture. Now is a suitable time to prepare pot trees, repotting, cleansing, and doing any necessary pruning. There will, however, be little pruning if due attention was paid to stopping and ripening of the young wood. The fruit produced on the ends of the new wood is of better quality than on other parts of the tree. In the case of plants which are large enough it is well to shake them out of the pots, removing a few inches of the old ball with a pointed stick and cutting back the large roots, replacing in the same sized pot and ramming firmly as the new compost is added. By reducing the ball, say, a couple of inches all round and cutting away a portion from the base, the trees will remain in good condition for two or three years. Larger trees that cannot be given a shift should be top-dressed with good material, such as turfy loam, with a liberal addition of bone-meal, old mortar rubble, and wood ashes if the loam is heavy. This builds up a sturdy, fruitful growth and short-jointed wood. Previous to top-dressing, the old ball of soil should be examined, and if at all dry well saturated before the new soil is added. After repotting it is advisable to place the trees under cover to prevent the new soil becoming soddened, but the plants should be kept as cool as possible, a thorough watering being given to settle the soil. Pot trees are less liable to insect pests than permanent ones, brown scale and mealy bug being the worst pests to deal with. In noting the value of small trees for a first crop, it may not be out of place to name the newer kinds valuable for hard forcing. St. John's and Pingo de Mel are invaluable, as they do not cast their first crop like some of the older kinds, and are wonderfully prolific. Though the fruits are not so large as those of Brown Turkey, they are above medium size and of good quality.

Young Fig trees.—Now is a good time to make a selection for pot work, as it is well to grow on a few young trees to take the place of worn-out ones. Excellent trees for fruiting next season may now be purchased in 6-inch or 8-inch pots to grow on. It is advisable to select those plants with a single stem and as short-jointed as possible, thus securing a good foundation for future crops. Cuttings struck last season should now be in condition to pot up into 8-inch pots or even larger if they have been well attended to during the first season of growth. I prefer shifting now before the plants have cast all their leaves, plunging the pots in ashes and sheltering from heavy rains. A cold frame or fruit house at rest is a good place to stand the plants in till started early in the year. Plants required for walls or planting out need different treatment. These should be pruned so as to secure good leaders for training and should be kept free of sucker growth. Any large enough to plant need not be potted on.

Permanent Fig trees.—These will be under two headings, those which provide fruit in May

and those which give a succession. I will take the earlier first. The leaves of these should now have fallen, and it will readily be seen what pruning is required. I am a great advocate for early pruning, as a longer season of rest is secured, cleansing is facilitated, and any necessary repairs, painting and limewashing may be proceeded with. In pruning vigorous trees endeavour to lay in what is termed fruiting wood, that is clean, firm shoots, not at all soft or green. Cut out all useless wood from the base, avoid crowding, and do not allow sucker growth to rob the fruiting wood. It will readily be seen what is termed healthy fruiting wood—the points of the shoots of the new wood on this season's growth bristling with embryo fruits. These must get the best place and ample space to develop. After pruning, cleansing, and regulating the new wood, top-dressing may be done, removing the old surface soil down to the small fibrous roots and giving new turfy loam to which a liberal quantity of bone-meal has been added.

Later trees which gave the supply well into September will continue to produce small fruits of the second crop if allowed to do so. The grower's aim should now be to thoroughly ripen the wood. Remove these late fruits and cut away all soft and useless wood. If the trees were well attended to in the way of moisture and mulching, they will not require water at this season for a time. Should the top growth be late, it is well to give a little fire-heat during the day with a free circulation of air. Trees that do not bear freely and need root-pruning should now be attended to. Give such trees a good layer of brick rubble under the roots with plenty of good loam well rammed, using mortar rubble or wood ashes to induce sturdy growth.

Cleansing Fig trees.—Now is the time to clear away any insect pests. By cutting away the old wood it is an easy matter to cleanse the new. Care is necessary, as the new wood is often covered with small embryo fruits, which should be preserved. Washing the wood with strong soapy water with a very soft brush will eradicate scale. It is advisable to paint the wood after the cleansing. The wood should be painted with a mixture of sulphur, soft soap, and clay, with a wineglassful of tar to a gallon of mixture for trees badly infested with bug, well rubbing in the mixture on the old bark. Omit the tar when dressing the young growths.

Late Melons.—The season for late Melons has been more favourable than usual, and the fruits so far have finished well. With a sudden fall in the temperature the grower will find a difficulty in getting good flavour unless there is plenty of top and bottom heat at command. For late work I advised pots, as the roots can be better managed as regards moisture and feeding. Very late fruits will need the latter to get quick growth. A liberal temperature must be given, as sudden changes will cause damping at the collar and collapse of the plants. There will be few superfluous growths on pot plants. Trees with more root space should not be allowed to make too much growth. Very little air will be required, and damping down should be done soon after mid-day. A night temperature of 70° must be given fruit finishing, the thermometer being allowed to run up freely during the day. The fruits as they ripen should be detached from the plants and finished on a warm shelf.

Strawberries in pots.—The plants will now be maturing the summer growth, and, with heavy rains, need care to prevent waterlogging. It is also well to move the plants frequently to prevent rooting through, and to turn them round to get them hardened. Runners will form freely; these need constant removal, and, though rather late, it is advisable to keep the side growths which form close to the main crowns removed. This, if done frequently, assists the crowns to swell up. Care must be taken that the plants do not get dry. I like to keep the plants as long as possible in the open if due attention is paid to moisture. G. Wythes.

Orchard and Fruit Garden.

CRYSTAL PALACE FRUIT SHOW.

To the Editor of The Garden.

Sir,—As a country visitor to the great fruit show recently held at the Crystal Palace, and as one taking an active interest in the management of a fairly good provincial show, I was quite taken by surprise at the lack of arrangement for staging the various exhibits. We look for slipshod work in shows managed by inexperienced amateurs, as they frequently are in places where social status goes for more than practical ability, when arranging the committees, but when visiting a great metropolitan show held under the auspices of the Royal Horticultural Society we have a right to expect that the arrangements shall be as nearly as possible perfect. But what was the fact? I found the greatest difficulty in locating the exhibits in the various classes, as in some cases exhibits in the same class would be found on different tables and perhaps at a long distance apart, while on the table or space which would seem to have been set apart for one class, exhibits in another had found a place. This was particularly noticeable in the class for six bunches of Grapes; one exhibit was missing from the table which held the others, and space which it might have occupied was filled by Grapes from another class. If this want of arrangement only affected members of the general public, there might be no cause for more than the grumble to which all Englishmen are entitled; but it is a fact that two exhibits, one of the twelve bunches of Grapes and the other of the six bunches, were completely overlooked by the judges until their attention had been called to the matter some time after the prizes had been awarded. In each case the exhibit was awarded a prize, which, but for persistence in looking up the judges, would have been lost to the exhibitor. It was the opinion of many good judges that one of these exhibits ought to have been placed at the top of its class. Surely arrangements which allowed of an exhibit of twelve fine bunches of Grapes being missed by the judges will bear some improvement, and the pity of it is that a retrograde step must have been taken, for in the old days when the admirable methods contained in the "Field Judging Book" formed the basis on which the judging at R.H.S. shows was carried out, such an oversight would have been next to impossible if the judges took the most ordinary care in carrying out their work.

In my opinion the diamond-shaped tables were a mistake in such a place as the Crystal Palace, where there is ample room for broad gangways between tables of the ordinary form. The little attempts to break up the line of sight were paltry in such an immense building and with surroundings so massive; they added nothing to and probably took something from the general effect, while they certainly helped to confuse exhibitors, judges, pressmen, and those members of the general public who wished to make notes. It is a positive injustice to exhibitors not to allow their exhibits space side by side with others in the same class, for judging cannot be well carried out under any other conditions, and if by any chance exhibits are overlooked, judges, being only human, do not care to alter their awards even when such mistakes are discovered in time to allow of alteration, while exhibitors who may have to take lower positions than those originally awarded may be forgiven for indulging in unpleasant remarks anent the whole business. Such a jumbling method of exhibiting the grand fruits that were brought to the Crystal Palace for this show ought to be beneath the R.H.S., and should never be repeated.—Cornubian.

—— The recent splendid show held under the auspices of the Royal Horticultural Society will doubtless become an annual one, but it will certainly need some revision before it commands respect from exhibitors. It is no easy matter for an exhibitor to travel a long distance, probably been up all night, and when he gets to the show to be bandied about from pillar to post, told to stage here, move there, and then have to move everything when he has set up his exhibits, owing to the space being required because, I suppose, more entries have come than room was allowed for. I protest most strongly against this haphazard staging. For instance, if there is not room, half a class or a portion is staged a considerable distance from the other. This is unfair to the exhibitors, to the judges and the visitors, and to those who wish to compare notes. Part of the class is never seen at all, and the exhibitor is not only worried at a time he needs a cool head, but does not get justice, the judges being unable (in some cases) to find the fruit. In others it is so crammed, that comparison is out of the question. Why cannot the Chiswick or Kensington method be followed, beginning at class 1 and following with each class as far as possible? I admit it may be necessary to have a prominent exhibit, like Grapes, in the centre, but that would be a simple matter, and the schedule could be followed throughout from, say, class 24 to 128; whereas a portion is wedged in here, another there, and there is confusion. Doubtless the judges in some of the classes will be strongly condemned for the errors of judgment. Take Grapes, for instance. Some staged were not seen when the class was first judged, the judges having to go over the exhibits again. The judges in this case could not be blamed. The exhibitor, who fortunately was present, looked after his own interests. I find assistants who dare to complain get scant attention, and it often happens young men are sent with exhibits. Of course I cannot justify the judges who gave the first prize to the wrong variety. This occurred also last year, and points out the necessity of the judges in each class being experts. Again, reversing the awards after the classes have been judged some hours is annoying to those who exhibit and is the cause of severe criticism. I admit trade exhibits can make a show, but there is a healthy sort of horticulture in competition, and exhibitors should be encouraged. Another point needing attention is the so-called gardeners' luncheon. Why not have a popular lunch near the exhibition? The last one was in a vast room at the extreme end of the grounds, needing a long journey to tired exhibitors on a melting hot day. The society, which is so anxious for reforms, will doubtless favourably consider my appeal on behalf of the poor exhibitor.—An Exhibitor.

—— Visitors to this show were no doubt much struck by the many fine dishes of Apples and Pears that were staged and admired their colour and finish, but how many of those kinds are really useful from Christmas onward many practical growers were asking themselves. For cooking Apples there were, in addition to those for collections, thirty-two classes, the greater portion of which consisted of early and soft-fleshed varieties, such as Bismarck, Cellini, Cox's Pomona, Duchess of Oldenburg, Ecklinville, Emperor Alexander, Lord Derby, Lord Grosvenor, Lord Suffield, Peasgood's Nonsuch, Potts' Seedling, Stirling Castle, Loddington, The Queen, Grenadier, New Hawthornden, Warner's King, and Gascoigne's Scarlet. I do not know who is responsible for the schedule, but certainly more attention ought to be paid to encouraging the growth of late kinds instead of those that only flood the market during September and October. As an illustration, let us take the variety Wellington, Dumelow's Seedling as some call it, the latter name being the one it was shown under at the Palace. In this class

there were twenty dishes staged, and when I complained of the first prize being awarded to a dish of New Hawthornden the cards were changed, but not till after the reporters had been round. The third prize, however, was withheld. This does not say much for the ability of the judges employed or the fairness of the authorities of the R.H.S. Again, in the class for Bramley's Seedling I failed to find the dish on which the first prize card had been placed, and many others were the same. True, most of those varieties named above are good show kinds, and did every credit to the cultivators who staged them, being very attractive on the show table on account of their colour and finish, but where should we be if fruit was simply grown for exhibition and all such kinds as were not showy discarded from our gardens? If those responsible for compiling the schedule had to supply the kitchen from January onward, they would be sadly wanting if only those mentioned above were grown. Why should not such sterling varieties as Yorkshire Greening, Norfolk Beaufin, Hanwell Souring, Royal Russet, Easter Pippin, Queening, and many others of like excellence find favour? Gardeners who have to supply the kitchen know full well the value of these long-keeping kinds, and on that account usually plant them in preference to more showy kinds.

Turning to the dessert kinds, we here find Worcestershire Pearmain, which is far inferior to the old Keswick Codlin, with a class to itself, while such grand varieties as Court Pendu Plat, Court of Wick, and Sturmer Pippin are left out. The first idea that would strike a practical gardener when looking over the schedule would be that it was either compiled by nurserymen who have those varieties of trees to sell, or by some interested party who has only a superficial knowledge of what is really required to supply a gentleman's establishment or our own markets.

Let us now turn to Pears, and here again we find the same blunders, prizes being offered for worthless kinds, while really good well-flavoured varieties are altogether ignored. One would have thought that a society like the R.H.S. would have set an example by encouraging the production of really first-class fruit, instead of which they do not seem to know what a really good Pear is, for many of the classes in their schedule were allotted to varieties of very inferior quality simply because they grow to an extra ugly size. Who cares for Souvenir du Congrès, Pitmaston Duchess, Maréchal de la Cour, or even for Beurré Diel? Such, no doubt, look well on the show table and in the shop window, but as dessert varieties they are certainly very inferior, and are not worthy to be compared with Gansel's Bergamot, Huyshe's Prince Consort, White Doyenné, Passe Colmar, Jean de Witte, Seckle, Thompson's, Hacon's Incomparable, Van Mons Leon Leclerc, or Zephirin Grégoire. Most gardeners know that soil and situation alter both the flavour and the appearance of Pears wonderfully. The latter kinds are, however, usually of the finest quality, and may be relied upon as being suited to most soils and climate, as I have found by experience from cultivation both in north and south. Here, too, the greater number of classes was for early varieties, while but few were allotted to the late kinds. If we are to have an R.H.S. worthy of the name, it should certainly take a leading place in horticulture instead of being in the background.—H. C. Prinsep, *Buxted Park, Uckfield.*

Apple Cox's Orange Pippin.—Surely this has been a record year for this famous Apple, as never have I seen such crops of it. It is hard to believe that this Apple refuses to fruit in some gardens, yet we must admit this from what we so often read in the horticultural press from time to time. During the last few weeks I have seen many standards of it, and in all cases the trees were carrying grand crops of fruit. In the orchard here one half-standard tree sixteen years planted gave us this season six bushels of highly-coloured fruit. The soil is somewhat heavy and retentive of moisture, yet there are but slight signs of canker or any other disease about the trees. In the orchard attached to Mr. Perkins' garden near Southampton there are at least thirty large trees of this Apple. The soil there is somewhat thin, resting upon gravel. As standards, bushes and cordon-trained trees as edgings to paths they are grown. In no case was there a failure to crop and the colour was remarkable. More than one fruit I measured was over 10 inches in circumference. In Mr. Peters' fruit garden at Nutbourne, near Emsworth, not far from the sea, where forty acres are devoted to fruit culture, Cox's Orange Pippin is held in the same esteem. The trees mainly are freely grown bushes, and at the time of my visit the branches were literally roped with fruits of excellent quality.—E. M., *Swanmore Park, Bishop's Waltham.*

—— This Apple is fruiting in this neighbourhood on half-standard trees with greater freedom than it has done for many years. Why this should be is not easy to say, as last autumn was anything but the best for consolidating growth. The majority of the trees of Cox's Orange in South Notts generally fail to fruit, not because there is no bloom, but because this falls to the ground instead of setting, it being very tender. A nurseryman told me some time ago that the delicacy of its bloom was its greatest drawback. I have it growing in various aspects as an espalier, but it fruits but very sparingly, although annually laden with blossom. I think with Mr. Molyneux that it does best grown in a loose, untrammelled form, the leading shoots being shortened but little, but the weaker spray entirely removed. Doubtless Cox's Orange Pippin is a capricious Apple, except in the most favoured soils and climates. In Essex I have seen healthy trees go barren year after year, and in a recent tour in Norfolk I did not once meet with a tree bearing a good crop.—J. C., *Newark.*

—— This must be a record year for good quality in what may be termed the best Apples. The fruits of Cox's Orange this season are finer than usual. At the recent Palace show there were no less than forty nine dishes in the single dish class. Cox's Orange appeared to me to be the most popular Apple in the building, and the dishes staged by Messrs. Turton and Wright showed to what perfection this Apple could be grown. I well remember how well this variety did in standard form in Hereford and Monmouthshire many years ago. So far, we have no dessert variety to equal it, and its free cropping makes it doubly valuable. I fear with so much heat during the last few weeks it will be impossible to leave this variety on the trees as late as one could wish, and the season will not be a long one. It is well to store late to secure good fruits during the first three months of the year, as when gathered late they do not shrivel so quickly if kept very cool.—G. W.

Late Apples.—The value of these will become more and more apparent if we continue to have dry summers and hot, sunny autumns, as under these conditions not only do all our early Codlins ripen too speedily and soon become useless, but midseason sorts also quickly follow on and are past long before they ought to be, a glut taking place in November. This is not only a drawback in private places, but a serious loss to those who grow for market. I think that if those who contemplate planting in the future were to include many more trees of later varieties than is usually done, better and more profitable results would follow, as many of the late-keeping Apples are fit for use in December. I cannot help thinking, too, that some of the very old sorts which seem to be elbowed almost out of cultivation would still pay well to grow. What better Apple is there for flavour than the old Sturmer Pippin, or for cropping either, although it is but of medium size? For pies and sauce I know of none to beat it. Hambledon Deux Ans is another excellent old and almost discarded Apple. I saw it in Lincolnshire two years ago in grand form on old standard trees, and it was the sheet anchor of the fruit room in February and March. Both these Apples carry with them a good amount of natural sugar. Rymer, again, another very old cooking Apple, will carry on the supply even longer, and although slightly acid, is delicious when cooked and sufficient sugar added. This sort used to be grown in Essex many years ago, but I had lost sight of it until last month, when I saw it at Blickling Hall, Mr. Oclee, who evidently knows its value, having planted it in a good position. One of the very best Apples to grow in order to prevent a break in the supply between the earliest varieties and those above-named is Earl Morrin. It is fit for use in October and will keep sound till February. —J. C.

Alpine Strawberries.—These are pleasing and almost showy from the number and brightness of their variously-shaped fruits, some being round and others egg, almond, and pyramid-shaped, and in all cases the fruits are fairly large and the green calyces more so proportionately. It is largely due to the dressy calyx and the way in which the bright red fruits are held up by the ascending, yet slender stalks that these plants attract notice so late in the year. However, one could do worse than plant these Strawberries for effect in the rock garden; their only fault for such purpose is the way they wander.—J. Wood.

Open-air Peaches.—I quite agree with "J. C." (p. 255) that Peach-growing against open walls is on the increase. In very few instances will the theory hold good that unsuitable seasons and positions are not favourable to open-air Peach culture. I have lately seen excellent crops upon trees growing in town gardens where the air is admittedly not so favourable as that in the country. According to my experience Peaches will fruit successfully not only on south, but also on east and west walls; indeed, it is an advantage to have trees growing against walls with a western aspect, the season of ripe fruit being much prolonged in consequence.—E. M.

Apple Bramley's Seedling.—I cannot say, like "G. W." (p. 255), that this Apple bears freely in a young state. In the autumn of 1891 I planted one hundred maiden trees; these were cut tolerably hard back to induce them to break vigorously near the base. Although they have grown well, I have had no fruit from them. I think they will bear freely when established and are making less vigorous growth. In the autumn of 1890 I planted fifty standards; these have grown freely and most of the trees bore a good crop of fruit this season.—E. M.

Small Pears.—I would like to supplement Mr. Prinsep's remarks on small Pears, page 234. Doubtless, as he contends, many of them are of much finer flavour than the larger kinds, to say nothing of their more suitable size for the individual guest at the dining table. Several of the sorts, however, mentioned by Mr. Prinsep are suitable only for the best of soils and climates. With me Winter Nelis grows and fruits remarkably well both on east and west walls, the soil being light and well drained, but Ne Plus Meuris on a sunny wall was never even in the best of summers fit for anything but stewing, so I discarded it. I do not think this Pear will ripen out of doors either in midland or northern counties. I have grafted it with Beurré Rance, a much more reliable variety, and, I think, still unsurpassed as a late Pear. Comte de Lamy is not so well known as it should be, as it is a certain bearer, is not particular as to soil or aspect, and being very sweet and refreshing, yet not overrich, is just the Pear for invalids. This little Pear does well in Norfolk. Aston Town, also mentioned by Mr. Prinsep, was grown here on a wall, but although the wood was clean and healthy and the tree not too vigorous, it never bore a single fruit, and was, after years of patient waiting, rooted out. I have been informed by a gentleman acquainted with its origin that it is very capricious, although when well ripened most delicious. Thompson's cannot be surpassed for richness, and succeeds well on our light, well-drained soil, but cankers badly a few miles away planted in strong loam. A cool season suits it best, as in a hot one

like the present it not only ripens weeks before its proper time, but is mealy also. Some years ago when our summers were more moist and cool, Thompson's did not ripen until December, but for the past few seasons it has been fit for eating in October. I have it on an east, also a west wall, but on neither will it stand a dry season. One of the very best of the small Pears, and which will moreover keep sound for a month when fully ripe, is Beurré d'Aremberg. It crops enormously whether on wall or espalier, coming into use in December. That old Pear Beurré de Capiaumont is not so often met with as formerly, although it is a constant bearer, and the crisp, juicy fruit is liked by most people.—J. C.

Princess Pear.—This Pear is very good this season, showing that it likes a warm soil and plenty of sunshine. It is a seedling from that excellent variety Louise Bonne of Jersey. Princess promises well both as regards cropping and good flavour; the flesh is soft and melting, and it is a very handsome fruit. I have it very good this season on a warm wall. Like many other varieties, it will be fit for use long before its stated season (November). The fruits at this date (the end of September) are colouring up freely. In future I intend to grow this variety in bush form on the Quince stock, and by this means get a succession to Louise Bonne of Jersey. The fruit when well grown is of a nice size—in fact, it much resembles that of its parent in size and shape, being long, pyriform, and of a pale yellow flushed with red.—S. H. B.

Pear Beurre Diel.—How well this variety has fruited this season. The fruits are larger than usual, and in my case quite free of the russet markings usually seen. The best fruits are on a warm wall with a south-west aspect. The stock is the Quince and the fruits are very fine, showing how well a hot season suits such varieties and the value of a warm soil. It will be interesting later on to test these very fine fruits and note if the flavour is superior this year, as with good finish there should be superior flavour and freedom from the grittiness this Pear is often subject to. I have this variety on the Pear stock in pyramid form, and the fruits are not at all good either in shape or size and always gritty, though well attended to, showing that this variety in cold or exposed districts and in heavy soil should be given wall culture.—G. Wythes.

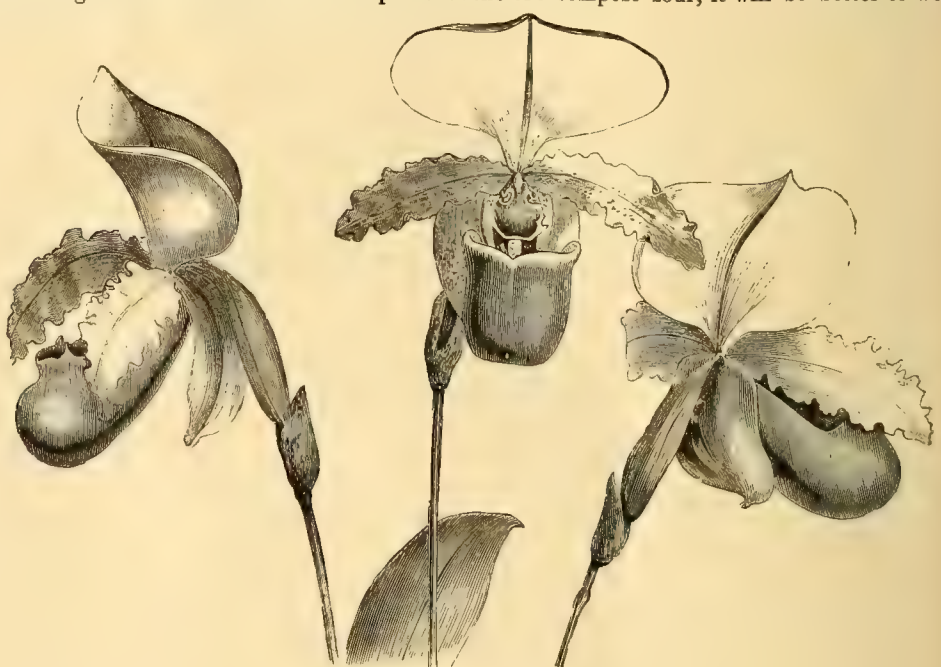
Plum Reine Claude de Bavay.—The brilliant sunshine of the past few weeks, coupled with the high temperature, has rendered this late Plum of most excellent quality, this being quite different from its behaviour in the ordinary run of seasons. The flesh with me has, as a rule, been stringy and of poor flavour. Whatever may be its quality in a better climate and on a warmer soil I do not know, but if we could rely upon it in the ordinary run of seasons to ripen as well as this year, it would be one of our most valuable Plums, ripening, as it does, so late as the last week of September and the first week of October.—A. Young.

Red spider on Vines.—Whilst holding to the opinion that in very bad cases of attacks of red spider exceptional remedies may be necessary, I certainly have faith in retaining the old bark on Vine rods, believing that the Vines are benefited thereby. During the past nine or ten years I have not had any taken from the Vines under my charge, and if the same winter treatment is accorded in the future as in the past, they may go on for as many more. The winter washing cannot be too thorough or enough care taken. In many cases the washing the Vines undergo is more a matter of form, that is, the wash is not made to soak deep enough. The best plan I find is directly after the leaves have fallen and the Vines are pruned to give the rods a thorough washing with warm soapy water, working it well in with a new painter's brush, afterwards before the rods become dry following on with an application of Gishurst compound. I daresay in cases where the Vines have been very badly attacked more drastic measures need to be taken, but otherwise I think the above course of treatment is ample, and if persisted in annually, red spider may be prevented from remaining on the Vines during the winter.—A. Young.

Orchids.

CYPRIPEDIUM SPICERIANUM.

With the opening days of October came the first flowers of this distinct and handsome species, and where sufficient plants are grown and brought on successively they will continue in beauty until the new year, the individual flowers lasting in many cases for four or five weeks. When first introduced, C. Spicerianum was very expensive, but, as is usual when the habitat of any Orchid is discovered, further importations soon brought down the price, and as it is now to be obtained for a few shillings and is seen in nearly all collections, it may be included amongst the most popular in this very extensive genus. It was named in compliment to Mr. H. Spicer, of Godalming, and comes from India, whence it was introduced in 1878. In habit, C. Spicerianum somewhat resembles the old C. insigne, but the undersides of the leaves, which are rather broader than those of the latter, are spotted with deep purple. It is a free grower, and under suitable conditions small pieces soon make good plants that flower freely at the proper season. The scapes are usually one-flowered, though when the plants are in vigorous health twin-flowered scapes are not uncommon. The dorsal sepal is from 2 in. to 3 in. long, pure white at the apex, with a deep purple line running down the centre and tinged at the base with green; the petals are 2 inches in length, wavy, light green with spots of purple, and the lip is broad and deep purplish brown. This represents a good typical form, but many variations will be found in a large number of plants both in size and colour. C. Spicerianum is very easily grown, and is not fastidious as to temperature. A brisk heat while making its growth suits it best, the leaves being larger and the flowers more freely produced than in a cooler house. Like all in the genus, it requires an abundant supply of water at the roots, and in making up the compost this must be taken into consideration and provided for accordingly. The best mixture I have tried consists of three parts of nice mellow, but fibrous loam with some of the soil shaken out from the fibre, the remaining portion being made up of peat similarly treated and fresh chopped Sphagnum Moss. Some growers leave out the latter altogether and depend wholly upon loam, but the Moss gives greater elasticity to the bulk and prevents it settling into a close and heavy mass. Some rough pieces of crocks or ballast should be mixed with this, or even preferably introduced as the work of repotting is in progress. The plants if healthy and in good condition at the roots should be disturbed as little as possible when repotting, just breaking the pot with a hammer if they are clinging to the sides and spreading them out well in the new pot, filling in with the compost to within an inch or so of the rim. If, on the other hand, they are found to be decayed and the old compost sour, it will be better to well wash the roots in warm water, swilling away the whole of the grit from about them and cutting away all dead parts. This is a state that Cypripediums take a long time to recover from, and very careful treatment is necessary to bring them round. The compost for such may be made a little lighter by the addition of more Moss and crocks, and the plants must be put into as small pots as possible. The drainage in each case must be thorough and well protected until the roots again get a hold of the compost. After potting, the plants must be put at once into heat and encouraged to grow strongly, watering freely as soon as the roots commence running among the soil. Towards the end of the summer the flower-buds will make their appearance, and if it is intended to keep up a succession, some of the last to show bloom should be retarded by placing in a slightly lower temperature, or by growing some of the plants a few degrees cooler the same end is attained. As soon as the blossoms are fully open the plants must be taken to a drier atmosphere in order to preserve them as long as possible. When they are over they may be kept as quiet



Cypripedium Spicerianum.

as possible until the end of January or early in February, and this will be the best season to repot any that require it. R.

Oncidium Lanceanum.—This has flowered twice this season, and the last of the blossoms are just going off. The chief attraction of O. Lanceanum is the rich contrast formed by the rosy violet shade of the curiously shaped lip with the deep chocolate spots on the sepals. The present season has been all that could be desired for this plant, the long-continued sunshine hardening and ripening up the foliage, which is larger and more healthy looking than usual. I grow it in moderately large baskets in a compost consisting largely of Sphagnum and charcoal, and find that it dislikes being disturbed. A clear light is of the utmost importance, and for this reason it is kept as near the roof glass as possible, and from now until the growth commences in early spring the plants will be kept nearly dry at the roots. —H.

Oncidium divaricatum.—The blossoms of this Oncidium are individually small, but they are produced in considerable numbers upon the large branching panicles. The flowers are bright yellow with reddish brown spots about the base of the sepals, petals, and lip. The plant is of easy culture and very free flowering. It should be grown in the Cattleya house in the ordinary peat and Moss mixture, keeping the pseudo-bulbs well above the rims of the pots. This plant usually commences to grow early in the season, and takes a long time to mature its pseudo-bulbs. These produce flowers at once, and the spikes if cut off when the flowers are newly opened often throw out small side branches, which are very useful for button-holes or sprays. It requires plenty of water while growing, but during winter it must be kept well on the dry side to induce the plants to rest until spring, this treatment being most likely to cause them to flower freely.

Odontoglossum grande superbum.—This is a fine form of the type, with very richly-coloured flowers of great substance. The varnished appearance usual in the species seems brighter and even more glossy than in the type and the sepals more brightly spotted. The lip is pure white in ground colour, with a few brownish spots. I have not seen more than four flowers upon a spike of this variety, while in the type from seven to nine are not uncommon. This, however, possibly arises from the fact that my plant is not very strong, though quite healthy and thriving.—H. R.

Maxillaria picta.—This old species is not large enough to find much favour in collections, but it is, nevertheless, a free-blooming and effective little Orchid. The flowers, produced on single-flowered scapes from the base of the bulbs, are each about 1½ inches across, bright yellow with crimson spots, the lip being almost wholly white. It is an easily-grown kind, thriving well in a cool house and requiring a fair amount of atmospheric and root moisture all the year round. It is best grown in small pots in peat and Moss. It is a native of Brazil and was introduced about 1830.

Houlletia Brocklehurstiana.—This is by no means a common Orchid, and it is a pity that it and the other species in the genus are not more grown, for they are really effective when in flower. The blossoms, moreover, are produced at such a dull season, that they are all the more welcome. The pseudo-bulbs of H. Brocklehurstiana are roundish ovate, and each bears one leaf a foot or more in length. From the base of these the spikes are produced, and bear many flowers which are brownish purple in colour, with many spots of brighter purple about the base of the sepals and petals. The lip is also spotted, but yellow at the base and bears on each side a peculiar horn-like process. Its culture is not difficult, the plants thriving well in pots or baskets in a free and open compost consisting of three parts of peat to one of Sphagnum, with a few pieces of charcoal or crocks. The plants like plenty of water at the roots while growing, and the atmosphere must also be kept very moist. The Sphagnum may with advantage be allowed to grow freely about the pseudo-bulbs in summer, but a little of this may be clipped off during the winter. This Houlletia thrives best in the warmest and shadiest part of the Odontoglossum house, and the foliage must be kept free of thrips and red spider. It is a native of Brazil, from whence it was introduced in 1841.

Lælia autumnalis atro-rubens.—This is a charming variety, one of the richest in colour of this favourite species. The growth and flower-spikes are very vigorous, the individual blooms being large and well formed. The sepals and petals are of a deep, but brilliant crimson at the tips, becoming much paler at the base. The lip has an intensely deep blotch of purplish crimson on the front lobe, the side lobes being creamy white, lightly spotted on the upper edges. This has flowered with me earlier than usual, possibly on account of the amount of sun during last month. It thrives well on rafts hung up near the light at the cool end of the Cattleya house, and during its season of growth requires plenty of water at the roots.—H. R.

CALANTHE VERATRIFOLIA.

The evergreen section of Calanthes to which this species belongs does not receive so much attention as do the deciduous species, such as vestita and its allies, nor can they be expected to rank so high in a gardener's estimation as these free-blooming and very useful plants. Still, they have many good points, not the least of these being the fact that they are very easily grown in an ordinary plant stove, and welcome additions to the flowering plants therein at this season. C. veratrifolia is as popular as any, and may occasionally be seen in capital condition where few or no other Orchids are grown. The foliage is large, giving the plants a very striking appearance whether in or out of flower, and the bloom spikes are upwards of 2 feet in length, bearing on the top a dense mass of flowers individually small and pure white. These last a considerable time in good condition if they are kept perfectly dry, but the least drop of water soon spots and disfigures them. It requires a moist heat while growing and abundance of water at the roots, and even when resting the soil about them must never be dry. It may be repotted in spring in a mixture consisting of fibrous loam, chopped Sphagnum, and well-rotted cow manure, adding some finely broken crocks to keep the mixture open. The pots should be rather large, so as to serve the plants for a couple or three years. The drainage must about half fill the pots, in large ones inverting a small pot over the drainage hole and filling up around it with the potsherds, finishing off with small bits and a good layer of rough Moss. This will make it impossible for the soil to be swilled down among the drainage before the roots get a good hold of the compost, after which there is no fear. The growth is usually rapidly made, and during the time this is going on a little weak manure water may be given at intervals of a week, or the plants may be lightly surface-dressed with one of the many good fertilisers now advertised. These greatly assist the growth, making it strong and vigorous, and the effect will subsequently be seen in large, healthy flower-spikes. If propagation is desired, the best plan is to cut through between the growths with a sharp knife some time before the division is to be made, endeavouring to secure as many roots as possible on each piece. The young shoots that spring up from the base may also sometimes be taken off and separately potted without interfering with the rest of the plant. The former plan is, I find, much the safer. As a great deal of the beauty of a plant of this kind depends upon the foliage, care must be taken that insects are not allowed to get the upper hand. Scale and red spider are the chief enemies, the former being more troublesome just as the new leaves are forming, and the sponge must be frequently used to keep them under. A few variations from the type are recorded, the principal being C. v. Regnieri, a form with a bright yellow lip, and one or two others. It is an old plant in collections, and widely distributed in Southern Asia and the islands of Australasia.

Odontoglossum maxillare.—Although fifty years have passed since this species first came into cultivation, it still remains amongst the rarest species of Odontoglossum. It is a native of Mexico, but the original plant described by Lindley in 1847 was a waif of whose origin nothing certain was then known. It was found by Roezl in 1872 on the Sierra Madre, in Mexico, and was re-named O. madrense after that locality by Reichenbach. It is under this latter name that the species is still most frequently grown. It is a handsome and distinct Odontoglossum, with thin two-edged pseudo-bulbs that measure 4 inches to 5 inches in height, and carry a pair of leaves 6 inches to 8 inches long. The flowers are borne on erect racemes, six or eight of them to each. In diameter they are each about 3 inches, the sharply-pointed sepals being white, marked with a blotch of reddish purple at the base; the petals are larger and broader, similar in colour, but with a larger blotch. The lip is shorter and broader than either the sepals or petals; it also is white, the disc and crest, however, being orange-yellow. The species has recently been in flower at Kew, and is well worth a place among autumn-flowering Odontoglots.

Pleione lagenaria.—None of our cool Orchids do more to brighten up the Orchid houses in autumn than the Pleiones. Of the four or five species at present in cultivation P. lagenaria is the earliest to flower, and it is at least as beautiful and free-flowering as any other species. When well grown it is not unusual to see the whole surface of the pans or pots in which the bulbs are completely hidden by the profusion of flowers. This species has the short flat pseudo-bulbs characteristic of the Pleiones. They are about 2 inches high and of a dark, dull green with brown mottlings. The scapes on strong healthy plants are mostly twin-flowered, one scape being produced from each of the two or three young growths which are already pushing from the base of the pseudo-bulb. Four to six flowers may, therefore, spring from one pseudo-bulb, and as they each measure 3 inches to 4 inches across the sepals and are of a bright rosy lilac, it may readily be conceived that a few panfuls make quite a brilliant show just as the dull days of early winter are setting in. The plants are destitute of foliage at the flowering season, this character and the dwarf habit of the species having suggested the popular name of Indian Crocuses. A few Maiden-hair Ferns and other light fine-foliaged plants should be associated with them when in bloom. The lip has a pale lilac ground, quite ornately blotched with yellow and crimson. This and all the Pleiones are natives of Northern India.

Dendrobium formosum var. giganteum.—This is certainly one of the finest Dendrobes in bloom at this season, the flowers, indeed, being individually amongst the very largest in this genus. When, as is the case with some of the stronger growths, eight flowers are borne at the apex of a single stem and each one measures from 4 inches to 5 inches in diameter, a large plant of this variety produces an effect not equalled by any other white-flowered Dendrobium. The sepals are comparatively narrow, but the petals are broad and full (frequently 2 inches or over in width); both sepals and petals are of a pure glistening white. The large spreading lip is also white, but has a large sulphur-yellow patch on the recurving front lobe. Dendrobium formosum is distributed somewhat widely over the East. It was in the first instance sent home by Gibson (the Duke of Devonshire's collector) from Khasia nearly sixty years ago. Since then it has been discovered and imported from Burmah, the Andaman Islands,

and other districts. Like most of the Dendrobiums with black hairs on the stems, it is not easy to keep it in good health for many years after importation. It is quite a tropical species, and during the growing period should have abundant heat and moisture and scarcely any shade. Several plants of the variety giganteum are flowering nicely in the Orchid house at Kew.

Rose Garden.

OCTOBER ROSES.

Here in the west of England we never had so few Rose blooms in the month of October as we have had this year. I am not speaking of Roses in nursery quarters or in gardens where they are exceptionally well cared for, but of Roses where the plants have only ordinary attention. In all the cases that have come under my notice there is a great dearth of flowers. The reason of this is not far to seek. The long drought and excessive heat are quite sufficient to account for this state of things, for although we had some dull weather and some showers of rain in the middle of the summer, sufficient moisture has not fallen to reach the roots of the Roses since May last. The most surprising of all are, I think, Gloire de Dijon and Rêve d'Or. These two useful autumn Roses are generally well laden with flowers at this time of year, and in a mild time frequently give plenty of handsome buds up to near Christmas, but now one has to search to find a passable flower. We do not want any better evidence than this, that even these free-flowering kinds cannot thrive in a dry root medium, nor can we wonder that mildew runs riot over these and others. Souvenir de la Malmaison is pretty clear from this pest, and is the only one that has given blooms of any value. Last year at this time Mrs. Paul furnished a few good blooms, but at the present time there are no signs of any flowers. Amongst strong-growing Roses, William Allen Richardson is certainly the most satisfactory autumn variety we have in a dry season. A large bush-plant growing in the open has furnished more flowers than any other, and still promises to continue doing so.



Campanula persicifolia alba. (*Fig.* 12. *See p.* 299.)

With regard to the Teas, the value of a deep and fairly rich root medium for them was never more manifest than during the present season, and even where this has been provided the want of root moisture is very evident in the weak growth and the presence of mildew on all varieties alike. At the same time there are less mildew and more flowers where a depth of good soil has been provided. Such weak growers as Mme. Charles, Ma Capucine, and Ethel Brownlow cannot make any progress when the foliage is laden with mildew, and should only be planted where the roots can have all the moisture they require.

Amongst the Hybrid Perpetuals none has surprised me more in its behaviour than Her Majesty. One always expects to see this Rose stricken with mildew even in a favourable season, but when that pest is more severe than usual in its attacks, I hardly expected to see a single plant developing three good flowers at the end of September. I find old plants of this Rose are more perpetual in character than young ones, and when the roots are well nourished the blooms on old plants are but little inferior in size and substance. Where all the plants have suffered from mildew more or less, I do not think it would be wise to single out any as likely to be able to withstand such an enemy another year. The three least affected by it under present conditions are Victor Hugo, Etienne Levet, and Magna Charta.

J. C. Clarke.

NOTES ON ROSES.

In an interesting article on autumn Roses in The Garden of September 21, page 213, the following statement occurs: "Augustine Guinoisseau, which really has no resemblance to La France, but stands out conspicuous on its own merits, is one of the freest, sweetest and most persistent of bloomers." I am much astonished to find anyone making this statement, for the Rose in question has never been claimed as a seedling, but both in foreign and English catalogues has been classed as a sport from La France. It is identical with it in form, in the shape of the petals, in growth, freedom of flowering and perfume. The National Rose Society's catalogue of exhibition Roses, which was drawn up by some of the most experienced Rose growers in the country, describes it as a sport from La France, and I have often heard these growers say that they could go through a row of La France and find flowers which they could stage as Augustine Guinoisseau. With regard to these Hybrid Tea Roses, there seems to be a craze amongst the foreign raisers, which some of our English rosarians have not been slow to take up, to class many of their productions under this head instead of placing them where they used to be formerly—amongst Hybrid Perpetuals, Teas and Noisettes. Thus Guillot, who brought out La France nearly thirty years ago as a Hybrid Perpetual, moved it into this class, and with it of course went its various sports—Danmark, Augustine Guinoisseau and Duchess of Albany. In the same way Capt. Christy, which we have always regarded as a Hybrid Perpetual, has also been foisted into this class, and the craze seems to be going on. Thus that fine new Rose of Alex. Dickson and Sons, Mrs. W. J. Grant (*alias* Belle Siebrecht), is called a Hybrid Tea, instead of being classed (as I think it ought to be) as a Hybrid Perpetual. We may well ask, where is the evidence



Campanula pyramidalis. (*Fig.* 13. *See p.* 299.)

of cross-breeding in Kaiserin Augusta Victoria? It is to all intents and purposes a pure Tea, inclining towards the Noisette section, but having no affinity to a Hybrid Perpetual that I can see. So, again, that good garden Rose of Mr. Geo. Prince—Clara Watson—instead of being called a Hybrid Tea should surely be a Hybrid Perpetual. Neither in perfume nor habit can I see any appearance of Tea blood, though of course, as Roses have been so much hybridised either naturally or artificially, it is very difficult to say what blood may not have entered into their composition; but this would be applicable to all Roses, and therefore could not be distinctly claimed by any. It is never well to multiply divisions, and I have for some years strongly advocated the plan of putting Hybrid Perpetuals, Hybrid Teas and Bourbons into one class, giving them all either the name of Perpetuals or Hybrid Perpetuals. This would end the confusion that now prevails and is likely still further to increase, as I see that the French growers are still announcing a considerable number of Hybrid Teas. There is one autumn-blooming Rose to which I would draw attention—Beauté Inconstante. It is one of those small Tea Roses allied to W. A. Richardson and l'Ideal, which go under the name of button-hole Roses; like them, it is of long growth, and the colour of the flower is one of those indefinable mixtures of apricot, peach and copper which people sometimes called terra-cotta, but it is very bright and admirably suited for this purpose. I recollect noticing the single Rose exhibited by Mr. Frank Cant to which Mr. Orpen alluded in a recent issue, and it struck me at the time that, though very like Bardou Job, it was quite distinct from it. Although I have not grown it myself, I understand from those who have, that Alister Stella Grey is likely to be a very valuable small Rose for continuous blooming. It will form a good companion to W. A. Richardson, of a different shade of colour, but somewhat in the same style. It was raised by Mr. Alexander Hill Grey, one of our most enthusiastic growers of Tea Roses.

DELTA.

SEPTEMBER IN SOUTH DEVON.

THE past month has been exceptional, both on account of its dryness and warmth, as well as from its immunity from wind. The rainfall has only amounted to 0·01 of an inch, though 0·27 of an inch fell between midnight on September 30 and 9 a.m. on October 1, and must, therefore, be added to the month's real rainfall by the Meteorological Society's rule. The rainfall of September, 1894, was 3·05 inches, and the average for the past nineteen years is 2 34 inches. From January 1 to the end of September the total amount of rainfall was 16·83 inches, with ninety days on which not less than 0·01 of an inch was measured. Last year for the same period the rainfall was 25·55 inches, with 150 wet days, the average fall for the nine months being 23·30 inches; so that at present we are 6·47 inches below the average. The dews were exceptionally heavy, even for September. The amount of sunshine registered was 213 hours 45 minutes, against 156 hours 5 minutes in September, 1894, and an average of 164 hours 25 minutes. There was only one day in the month on which the sun did not shine. The amount of sunshine registered for the first nine months of the year reached 1644 hours 15 minutes, while that for the same period of last year amounted to but 1364 hours 20 minutes, or nearly 280 hours less. The mean temperature was 60·9°, being 3·1° above the average mean temperature of September The highest temperature recorded in the screen was 73·9° on the 28th, and the lowest reading on the grass 43·0° on the 17th. These readings show that the South Devon seaboard has been particularly favoured during the period of abnormal heat that has been experienced throughout the kingdom. The total horizontal movement of the wind was 3175 miles, the month having been the calmest for the last two years.

The garden, despite the drought, has been gay with autumn flowers, the drenching dews having kept the lawns green and the herbaceous plants from flagging. The Starworts, with their varied colours and heights, have made the borders beautiful with tender gradations of tints ranging from lilac-blue to white. The first to open was the white Harpur-Crewe, to be followed by the large-flowered and brightly-colcured Amellus bessarabicus, Archer-Hind and the 6 feet high Robert Parker, the latter, with its wealth of pale mauve flowers, being perhaps the most effective of all the Asters. Pluto, a dark-flowered variety of the Novi-Belgii section, is worth a place in the border, as is A. puniceus pulcherrimus, a good large-flowered white. The beautiful A. ericoides, in great request for indoor decoration, and even more graceful than the somewhat similar A. cordifolius and its lilac-tinted variety A. c. elegans, should be grown in quantity, and, for the sake of old associations, A. diffusus horizontalis, the commonest Starwort in the cottage gardens, and a pretty sight when smothered in its inconspicuous maroon and white blossoms, should not be omitted. Of the Novæ-Angliæ section the best are ruber, a dark rose colour, and Melpomene, purple. Pyrethrum uliginosum has produced its large, narrow-petalled white stars in profusion, sheaves of its long, graceful flower-scapes being cut for arranging in tall vases. Of yellow, an abundant display has been afforded by the Helianthus family. A line of H. giganteus at the boundary fence has carried a wide fringe of saffron over 8 feet high. H. lætiflorus, with its rich gold and black centred blossoms, has made a fine effect against an evergreen background, while H. multiflorus and H. m. Soleil d'Or, H. rigidus (of which the variation named Miss Mellish, now to be seen in perfection at Kew, is a distinct advance upon the type), the annual Sunflowers, both the giant, with their large, dark discs, and the miniature strain, the Rudbeckias, early Chrysanthemums, and yellow Cactus Dahlias have all added their quota to the preponderating tone of colour. Of reds, we have had long spires of the thorny-leaved Erythrina crista-galli, the last spikes of Lobelia cardinalis, the scarlet Cactus Dahlias and the Tropæolums, while the tuberous Begonias have, week by week, increased the splendour of their dazzling carpet. The white Everlasting Pea (Lathyrus latifolius albus), that was badly injured by the severe winter, did not open its first blossoms till well into the month, and the standard Magnolia grandiflora, which shed all its earlier buds, has made a second and more successful attempt at flowering, and produced a number of its fragrant white chalices during September. The Belladonna Lilies have flowered well, and the row of Anemone japonica alba has been throughout the month a white cloud beneath the ivied wall. The last of the Lilies—L. tigrinum Fortunei—has been remarkably fine, having grown to a height of over 6 feet. This variety is, with me, distinctly the most satisfactory of the Tiger Lilies. Two tall Palm-like plants of Aralia spinosa, now fully 15 feet high, have flowered for the first time, and, with the straight shafts of their stems shooting up from an undergrowth of Cannas, Hedychiums, and Acanthi, have put a finishing touch to the broad outlines of a sub-tropical picture. The most noticeable of the September Roses has been the white Macartney, which, commencing to bloom in July, has not since let a day pass without the opening of two or three delicately scented single blossoms, sometimes 4 inches in diameter, with the snowy petals of which the golden stamens form a harmonious contrast. The large Hydrangea bushes with their wealth of massive blossoms, now pink, now almost white, sometimes of well-nigh Forget-me-not blue, have lighted up the verges of shady paths and bloomed on sunny banks with equal vigour. Solanum jasminoides, which, associated with the scarlet Tropæolum that had scaled the house-wall, furnished such a striking colour-picture during August, in September was associated in an even more beautiful combination of tints. Ampelopsis Veitchi had grown behind the wires on which the long flower-sprays of the Solanum wandered and swayed, and for a full week from the eaves downward the white bloom-clusters stood out against the background of the crimsoning creeper, a sight beautiful as it was fleeting, for the month's end saw the background vanished and the crimson leaves lying among the Heliotrope beneath.

September has been a fine month for the ripening of outdoor fruit, the Peaches having swelled up well and coloured grandly. Sea Eagle has been especially satisfactory, many fruits on a tree bearing a good crop having reached nearly 1 lb. in weight. Pears, although not a heavy crop, have been individually fine, one fruit on a young tree of Triomphe de Vienne weighing 27 oz. Apples have been a heavy crop, King of the Pippins, which bore prodigiously last year, being almost the only failure. Cellini and Barnack's Beauty have produced exceptionally fine fruit, and of Cox's Orange Pippin a fair crop in good condition has been stored. Of large cooking Apples, Warner's King and Gloria Mundi have both fruited well, and Bismarck has perfected a fine crop, the small trees being loaded with large fruit, running from a half pound to 1 lb. apiece in weight. Lane's Prince Albert has also borne heavily. King of Tompkins County does very indifferently here, and lacks the bright colouring of imported fruits of this variety. S. W. F.

SOCIETIES AND EXHIBITIONS.

ROYAL HORTICULTURAL SOCIETY.

OCTOBER 15.

THE Drill Hall was again crowded on this date with exhibits of the most comprehensive character. These were also very remarkable for their high-class quality, whether it be in plants, fruits or vegetables. Amongst plants the post of honour must be accorded to Mr. Wythes' large exhibit of Nepenthes; some two dozen splendid examples of the best and newest kinds (but few being in duplicate) were staged. The pitchers were very finely developed and in good character for the respective varieties, the new and rare Veitchian hybrid, N. mixta, being especially noteworthy. The gold medal was most deservedly awarded to this exhibit. Crotons from Mr. H. B. May, finely grown and of rich colour, showed the great value of these plants for decoration. Orchids were present in the greatest abundance. Of these, Cattleya labiata, now in its season, was represented by several superb forms, notably a very fine white variety. The rare and unique Lælia Dominiana, of the richest colouring, was also present from The Dell collection, whilst from Messrs. Sander came a grand plant of the singular Habenaria Susannæ in unusual vigour. Chrysanthemums are already well advanced, a fine group from the Ryecroft collection being staged, as well as several new and noteworthy kinds from the best growers. Dahlias, still holding out well, testified to the favourable state of the weather, the singles in this instance being the most prominent.

Fruit was present in great abundance and in large variety also. From Sawbridgeworth came a very fine assortment of the best Apples, the perfect finish and colour being most remarkable, some of these being orchard house fruit. A large and fine collection was also staged by Messrs. Veitch and Sons. This comprised varieties only that were not shown at the Crystal Palace, hence not quite so large as on that occasion, but the present exhibit was valuable in that it proved that, over and above the 100 kinds shown at the Palace, it is not by any means a difficult matter to stage yet another 100 sorts of excellent quality. The conditions under which this exhibit was staged were clearly indicated, but by many they were not fully realised. Other and smaller exhibits of fruits were very numerous, Melons being still in good condition, whilst of Pears, two very highly coloured dishes of Doyenné du Comice were shown by Mr. Hill from Tring Park; these were notable by their perfect finish and high-class colour. An award of merit was

most deservedly given to a new late Plum from Messrs. Rivers, which bids fair to be the finest late kind grown for cooking. Of vegetables there was one large and most meritorious exhibit from Mr. Beckett, a well-known cultivator. Every dish in this collection (as comprehensive as it could well be) was of the highest excellence, and it deserved a better award than it obtained. Other exhibits comprised abnormally large Onions, good Leeks, and Celery.

Orchid Committee.

At this meeting first class certificates were given to—

Cirrhopetalum Rothschildianum.—A very distinct and remarkably fine species of this singular and interesting genus, the flowers much larger than in most species. The colour of the entire flower is a dark vinous red with bronzy suffusion; the tail-like sepals, broad at the base, are fully 6 inches in length, while the greenish yellow at the base affords a pleasing relief. Shown from Lord Rothschild's collection at Tring by Mr. Hill.

Cattleya labiata Cooksoni.—A pure white form and the finest in its way yet seen; the sepals and petals are of the purest white, the latter being also of extra breadth; the lip has the central part of the brightest crimson-purple, with a well-defined white margin. This fine form was greatly admired. From Mr. Norman S. Cookson, Wylam-on-Tyne.

Awards of merit were made to the following:—

Cattleya Mantini (C. Dowiana × C. Bowringiana).—A very beautiful hybrid, but one in which the well-known features of its former parent are greatly subdued, its stamp being chiefly visible in the golden veins in the throat. The colour is deeper than in the best forms of C. Bowringiana, the sepals and petals broader, the lip of a deep purple shade, and the plant of dwarf habit. From Messrs. James Veitch and Sons, Chelsea.

Sobralia Lindeni.—A distinct species of moderate growth with white sepals and petals, the lip mottled with crimson and relieved with white. The flowers had apparently suffered in transit, hence it was not seen to the best advantage. From Mr. Lucas, Warnham Court, Horsham.

Cypripedium Alfred Hollington.—A very fine hybrid, the parentage of which was not given, but in which C. Curtisi was very discernible, being in all probability one of its parents; the pouch was after C. Curtisi, but of the two larger and quite as dark in colour; the petals partake of the same drooping character with somewhat similar markings, being also longer. The dorsal sepal is broad, but pointed, with dark purplish veins. The spike bore twin flowers, whilst the habit is vigorous. From Mr. Hollington, Forty Hill, Enfield.

Miltonia Cobbiana.—A distinctly superior form of the M. Clowesi section, the lip much larger and finer, and also clearer in its markings; the sepals and petals are darker in colour, the same being well defined. From Mr. Cobb, Dulcote, Tunbridge Wells.

Cattleya labiata (Thompson's var.).—A very superior form with flowers of unusual size and substance, the petals being of extra breadth also; both sepals and petals are much deeper in colour, whilst the same remark applies to the labellum, which is of an intensely deep crimson-purple, the margin being delicately fringed. From Mr. Thompson, Stone, Staffs.

Cattleya labiata cœrulea.—A distinct and noteworthy form, and as such deserving of the award, but it is not so handsome as the preceding by any means. The sepals and petals are slightly flushed, whilst the lip is of a pale purplish tint, the individual flowers being of large size. From Mr. Thompson.

Cypripedium Charlesworthi marginatum, which chiefly differs from the type in having the dorsal sepal of a much lighter shade, the central part of which is nearly white with a slight tinge of rose towards the margin and darker at the base. From Mr. Thompson.

Mr. Gurney Fowler, Woodford, Essex, had an extra rich and finely cultivated group, in which were included several excellent varieties of Cattleya labiata, bearing a profusion of bloom. In the same collection was to be seen a grand example of Epidendrum Godseffianum, with long terminal spikes of bloom, the bronzy sepals and petals with the rosy lilac lip being very effective. Vanda cœrulea in the same collection was excellent, and so was Miltonia Moreliana, but slightly paler than usual (silver Flora medal). Messrs. Sander and Co. had an excellent group, which included both cut specimens and plants of Dendrobium Phalænopsis Schrœderianum, showing a wide range of colour. Oncidium Marshallianum was very fine, the spike a dense one. Cattleya labiata was also present in fine varieties. Of Zygopetalum Gautieri an excellent example was shown, its novel colouring making it most distinct, the lip being of an intensely dark shade. Habenaria Susannæ was particularly fine, the long spikes bearing large pure white blossoms, with the lip deeply serrated. Both Sophronitis coccinea and S. grandiflora were present, as also was Miltonia Moreliana. Lælia Perrini nivea, a pure form both beautiful and rare, was much admired here. An imported Lælio-Cattleya was also shown, bearing some resemblance to L. elegans in the tinting, but the lip was that of a Cattleya and deep purple in colour. Cattleya labiata lilacina, very distinct in its marking, with only one slight splash of purplish crimson on the lip, was quite distinct. Of Cypripediums there were C. œnanthum superbum, C. Niobe, C. Tityus, C. Albert Truffaut, and C. Thayerianum; and of curious Orchids there were Mormodes species, very dark in colour, and M. buccinator, with Catasetum species, an intensely dark kind. Epi-Lælia Hardyana, a most beautiful hybrid, with long narrow sepals and petals slightly tinted with rosy lilac, and the lip a deep vinous purple, was also noteworthy (silver Banksian medal). Messrs. B. S. Williams and Son sent a very interesting group, which comprised a beautiful example of Oncidium incurvum full of flower. Oncidium ornithorrhynchum was also shown, as well as Odontoglossum grande and those difficult-to-cultivate Orchids, Pescatorea Lehmanni and P. Klabochorum splendens. Cattleya labiata was included also, as were several choice hybrid Cypripediums, as C. Peetersianum, C. Pitcherianum (Williams' var.) and C. œnanthum superbum, with others. Pleione lagenaria also made its appearance here (silver Banksian medal). Messrs. H. Low and Co. had a remarkably fine collection of Cattleya labiata in great variety and of high class quality, the growth of the plants being very robust and sturdy. One form called Lowæ was also shown. It has white sepals and petals, with a crimson-purple lip, being much in the way of Cooksoni, but as the flowers were scarcely expanded one could scarcely judge of its real merits. Another very dark form was shown here with the lip yet darker. Phalænopsis Portei and Bulbophyllum mandibulare were also included here (silver Banksian medal). A cultural commendation was awarded to Mr. Thompson for a very fine example of Vanda Kimballiana bearing seven spikes, most of which were expanded.

Of other exhibits, Messrs. Veitch and Sons had several hybrid Orchids, including Lælio-Cattleya Eunomia superba (C. Gaskelliana × L. pumila), which might be described as a glorified L. pumila, the lip extra fine and deep in colour; L.-C. Parysalis (L. pumila × C. Bowringiana), of very dwarf habit, and L.-C. Fortuna (L. elegans alba × C. Mossiæ), the sepals and petals of which were slightly flushed, and the lip with a dark crimson blotch. L.-C. Isis (C. Mastersoniæ × L. pumila), dwarf in growth and bearing large flowers of a bright rose colour, was very striking here. From Sir William Marriott, Blandford, came Cypripedium Marriottianum, a white hybrid with dark veins and spots. From Baron Schrœder came Lælia Dominiana, an almost unapproachable hybrid of most intense colouring, the lip being of a rich velvety maroon shade, relieved with faint golden lines; this is a gem amongst hybrid Orchids. Lælia Perrini alba was also shown with pure snow-white flowers from this source. Mr. Ebner, Beckenham, showed two distinct-looking hybrid Cypripediums, the names of which were not intelligibly written. In Mr. Statter's exhibit were to be seen a few rare and choice things, as Cattleya bicolor cœrulea, with pale greenish yellow sepals and petals, with a clouded or lavender-blue lip; also C. aurea (Stand Hall var.), in which the rich yellow petals were tinted with the colour of the lip. C. aurea, in good form, was also shown, as well as Lælio-Cattleya Parisiana, a very distinct-looking hybrid, with rosy mauve sepals and petals and a rotund lip of crimson-purple. A small collection of Orchids came from Mr. McArthur, Maida Vale, which comprised forms of Cypripedium Charlesworthi, C. Tennyson, a bright-looking hybrid, also C. insigne Gortoni, with Cattleya labiata and Oncidium varicosum Rogersi bearing good spikes. From Mr. Thompson came, in addition to the certificated plants, the following: Odontoglossum Pescatorei, a very distinct variety with pure white sepals and petals, the characteristic spots being very bright and dark in colour, a most beautiful variety and the spike a very fine one. O. Harryanum was represented by a very fine spike of large flowers, with the colouring deeper than usual. O. Schrœderianum, a singularly distinct species with reflexed sepals and petals of a dark tint, with the lip half white and half rosy purple, a pretty variety, and O. crispum Thompsoni, a fine form bearing large massive flowers, thirteen to the spike, were also very conspicuous. From Messrs. Charlesworth and Co., Bradford, came a grand mass in profuse flower of Vanda cœrulea, with seven spikes of bloom; also Cypripedium Charlesworthi in variety, as well as Catasetum Bungerothi, Cattleya labiata, Odontoglossum crispum and Vanda Kimballiana extra fine with large flowers. Mr. Hollington had another hybrid Cypripedium in C. A. J. Hollington, with creamy yellow flowers faintly spotted, and from Mr. Fowler came, in addition, Vanda Sanderiana, with extra fine flowers, the markings deeper than usually seen. Mr. de B. Crawshay showed Vanda Kimballiana (Mrs. Studd's var.), a fine and distinct form with pure white sepals and petals, but broader than in the type, the lip also larger. Sir F. Wigan showed the singularly beautiful Cœlogyne pandurata, a fine spike of flowers. From Mr. Ashworth came a hybrid Cypripedium, the flowers of which had been cut the previous day after being fully expanded for three months and seventeen days, and still fairly good. Mr. Lutwyche showed Oncidium tigrinum, a particularly fine spike of this beautiful cool house species. Of Continental exhibits there, came from Mons. A. A. Peeters Cattleya labiata Peetersiana, which has mottled sepals and petals and lip, the colouring also deep and strangely commingled; the effect scarcely beautiful, but distinct. Cypripedium François Peeters, of dwarf habit and with dark vinous-purple flowers, came from the same source.

Floral Committee.

The exhibits before this committee were interesting and varied.

First-class certificates were given to the following:—

Physalis Franchetti.—We have previously described this remarkable plant, one of the choice things recently brought from Japan by Mr. James Veitch. Picture to oneself a much enlarged edition of the ordinary P. Alkekengi and one has a good idea of this new introduction. The bladder-like covering to the calyx is about 2½ inches long and the same in breadth, but the size varies somewhat, as also the colouring, which is sometimes intense scarlet and sometimes shaded with yellow, the colouring depending upon the ripeness of the fruit. Messrs. J. Veitch and Sons showed this splendid hardy plant, so free, bold, and brilliant in colour, not so pleasing, it is true, as in the old kind, but creating a superb picture at this season in the open. Its

huge fruits are very handsome, too, in large decorations.

Abies Douglasi glauca pendula.—It is, of course, very difficult to judge of an Abies in a pot, but we think this is a good variety. Its foliage has quite a glaucous tone, and the branches are conspicuously pendent. From Messrs. Paul and Son, Cheshunt.

An award of merit went to each of the following:—

Chrysanthemum Lago Maggiore.—A very handsome variety of the Japanese class, the flower large, not stiff, the outer petals drooping gracefully and rich yellow in colour. We admire this variety because free from coarseness, and the colour is both decided and rich. From Mr. H. Briscoe-Ironside, Cedar Lodge, Burgess Hill.

Chrysanthemum Lady Esther Smith. — A beautiful incurved Japanese variety, the flower compact and dead white. A distinct and welcome introduction. From Mr. Owen, Maidenhead.

Chrysanthemum (pompon) Yellow Gem.—This is well named. It is a gem amongst this class, the flowers of delightful form, pure yellow and fimbriated. A large bunch of it from Mr. Owen, was one of the best things of the meeting.

Chrysanthemum Phœbus.—A very large and handsome flower, one of the most striking of recent introductions. It is broad without coarseness and the colour is of a bright and pleasing yellow. Shown by Mr. H. J. Jones, Ryecroft Nursery, Hither Green Lane, Lewisham, and Mr. Shoesmith, of Woking.

Chrysanthemum Boule d'Or.—One of the incurved Japanese class, the flower large, rather pale yellow, with bronzy lower petals. Exhibited by both Mr. H. J. Jones and Mr. Wells, Earlswood Nurseries, Redhill.

Chrysanthemum Pride of Madford.—A striking flower, large, as the majority of the new kinds, and belonging to the Japanese class. The florets are purple-rose with silvery reverse, a pleasing harmony of colour. From Messrs. H. Cannell and Sons.

Chrysanthemum T. B. Haywood.—A beautiful Japanese variety, the flower large, refined, and of the purest white. From Mr. Salter, gardener to Mr. T. B. Haywood, Reigate.

Violet Princess of Wales.—A very large, rich blue Violet, the flowers sent by Messrs. Cannell having been gathered from the open ground, and, what is of great importance, one gets a full, rich perfume. From Messrs. Cannell and Mr. Owen Thomas, gardener to Her Majesty the Queen, Frogmore.

Begonia Mrs. Heal.—This is another splendid hybrid raised by Mr. Heal, and is the result of a cross between a tuberous variety and B. socotrana. The plants shown were quite distinct, sturdy in growth and bearing a profusion of warm carmine-rose flowers. Individually they are of fine shape, almost round, robust, and carried in clusters, as it were, the plants being a mass of colour from the many bright blossoms. It is a decided advance, and in time doubtless this winter-flowering race will rival for brilliancy and usefulness the glorious varieties that make the garden gay in summer and early autumn. From Messrs. J. Veitch and Sons.

Carnation J. Gardiner Muir.—A very delicately-coloured Carnation with a fringed petal. The flower is large, strongly scented like the Clove, and white, with a soft salmon centre; the plant is strong in growth and very free-flowering. We value it, not only for its strength and refined colour, but especially for its fragrance, wanting unfortunately in many varieties, such as that much-praised kind, Mrs. Leopold Rothschild, which was shown with J. Gardiner Muir. We protest, however, against the name; it is ugly and unnecessarily long. From Messrs. J. Veitch and Sons.

The chief group came from Mr. G. Wythes, gardener to Earl Percy, Syon House, Brentford, and the highest award (a gold medal) was deservedly given to it. The collection of plants consisted chiefly of Pitcher Plants (Nepenthes), and we think very few gardens could produce such an interesting display. The group was well arranged, Crotons, Dracænas and Ferns forming a groundwork, as it were, to the Nepenthes, each of which was remarkably well "pitchered," and comprised both old and recent kinds. Especially fine was that beautiful kind N. Mastersiana, which we think is one of the best of the family. Conspicuous also was the comparatively new hybrid, N. mixta, about which we have written before in The Garden. N. Hookeriana, N. Chelsoni, N. Amesiana, N. Dicksoniana, N. Curtisi superba, N. Rafflesiana, N. Wrigleyana and N. Northiana were amongst the best grown, whilst of the fine-foliaged plants we noticed splendid plants for colour of that graceful, narrow-leaved Croton named Countess. The group occupied the best part of one side of the Drill Hall. A silver-gilt medal went to Mr. H. B. May, The Nurseries, Dyson's Lane, Edmonton, for one of the most delightful groups we have seen from this firm. The Crotons and Dracænas made as bright a display almost as a bank of flowers. Of the Crotons we may mention Alexandra, Nestor, aneitensis (very beautiful), the leaves rather narrow and yellow barred with green; majesticus, ruberrimus, red and green in its leaf colouring, Thomsoni, a broad leaf, and marked with green and yellow. A new Carnation named Primrose Day is a pleasing yellow variety, and a new Fern named Pteris cretica Wimsetti was noteworthy, the growth dense, and the tips of the fronds densely crested. The same award was made to Mr. H. J. Jones, of Lewisham, for his tastefully set-up group of Chrysanthemums. The plants were not densely put together, as the fashion was recently, but each kind could be well seen, the base of the group Ferns, Araucaria excelsa, and other fine-foliaged plants. George Biron was conspicuous amongst Japanese varieties, the flowers dull red with old gold reverse, and one noticed a mass of that splendid little Japanese kind for cutting, Ryecroft Glory, the flowers rich yellow. Mr. Jones also had numerous new kinds in boxes, some of which have been already described. Mrs. D. Airdrie, white, M. G. Montigny, pink, incurved Japanese, and Emily Spilsbury, of purest white, are valuable introductions. A siver medal was awarded to Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, for a bunch of single-flowered Dahlias, but as we have already made many notes on Dahlias this season, it is unnecessary to again allude to the rich selection here presented. Lilium nepalense, illustrated by a coloured plate in The Garden, January 19, 1889, and Nerines in many forms comprised this bright and interesting group. A bronze medal was awarded to Mr. W. J. Empson, gardener to Mrs. Wingfield, Ampthill House, Ampthill, for a group of indoor plants.

Among other contributions were the following: Mr. Owen, Maidenhead, showed some very fine blooms of new October-flowering Chrysanthemums, such as C. Bernard, a bright chestnut-red Japanese variety; M. Backmann, very pretty, buff, tinted with red; Lady Ridgway, bright yellowish buff, reverse reddish in colour, and others noticed above. Messrs. Cannell and Sons showed many interesting exhibits. The beautiful single Violet has been already described, and a word of praise must be given to the valuable series of zonal Pelargoniums, such as Mme. Beuvron, pink, with a multitude of crimson spots in the centre, Lady Newton, salmon-pink, a lovely variety, and Belle Alliance, a neat little flower, white, freely dotted with purple, besides several bunches of Canna Queen Charlotte, a brilliant variety, carmine, edged with rich yellow. Mr. Anthony Waterer, Knaphill, Woking, showed a boxful of flowers of that fine variety of Spiræa Bumalda named Anthony Waterer. It was exhibited to show how late in the year it flowers. Messrs. J. Veitch and Sons had Caryopteris mastacanthus, a bright purplish, hardy-flowering shrub, very charming at this season, and Messrs. Paul and Son showed late autumn flowers, amongst them that fine perennial, none too well known, Rudbeckia purpurea, its flowers rosy purple in colour. They also had plants of the pot Rose Winter Bloomer, a neat flower of the Catherine Mermet character, rosy in colour and deeper at the edge, the perpetual blooming climbing Rose Alister Stella Gray, and plants in bloom of Caryopteris mastacanthus lifted from the open. Mr. Salter, gardener to Mr. T. B. Haywood, Reigate, showed seedling Chrysanthemums, one described above and another named Mrs. H. B. Higgins, a seedling raised in Australia. Its white flowers were about 11 inches across. Messrs. Dobbie and Co., Rothesay, had flowers of single Cactus Dahlias and Shirley Poppies so-called, but which are only improved forms of the field Poppy. Mr. G. F. Wilson, Heatherbank, Weybridge, showed a plant in full flower and lifted from the open of Tricyrtis hirta. Messrs. Veitch and Sons showed a group of Lilium longiflorum Harrisi, and Mr. Briscoe-Ironside a rotary arrangement for cut flowers, which is a useful and artistic contrivance.

We must not omit to mention the beautiful climbing pillar Begonias from Messrs. Sander and Co., St. Albans. Duchess of York has bronzy-red leaves, Duke of York is of a similar metallic lustrous colour, and another lovely variety is Princess of Wales, the leaves quite silvery. Sarracenia Drummondi major is an exquisite variety; the pitchers are light green for the most part, the mouth veined with crimson. The same firm had a charming series of hybrid Sonerilas. One named Silver Queen has leaves of a self silver tone. Messrs. B. S. Williams and Son, Upper Holloway, showed a collection of Nerines, N. Moorei, brilliant scarlet, N. sarniensis, rose, and N. flexuosa, rose, being noteworthy. A collection of cut flowers of leading Chrysanthemums came from Mr. Owen Thomas, Frogmore, Mrs. Harman-Payne and Avalanche being very fine.

Fruit Committee.

The exhibits before this committee were numerous, many of them of special merit. Vegetables were excellent; Apples and Pears being also staged in quantity. Melons were deficient in flavour, and the new varieties of Grapes staged did not compare favourably with older varieties.

An award of merit was given to—

Plum Rivers' President.—A large black fruit, somewhat like Monarch, but much later and of very good flavour, considering the time of year. It is a freestone and is said to crop freely.

A very fine collection of fruit was sent by Messrs. Rivers, Sawbridgeworth, the Pears being noted for their splendid finish. Mention must be made of Conference, Magnate, a very large yellow fruit; Princess, Fertility and Beacon, new seedlings of great merit. There were very fine dishes of Durondeau, Nouvelle Fulvie, Lebrun, Doyenné du Comice, Glou Morceau, Beurré Diel, B. Alexander Lucas and B. Bachelier. Some grand baskets of Cox's Orange Pippin, Rivers' Codlin, Bijou, Cellini, Peasgood's Nonsuch, Crimson Queening, Beauty of Kent, Ecklinville, New Hawthornden, Ribston and other good dessert kinds were included, well meriting the silver-gilt Knightian medal awarded. Messrs. Veitch, Chelsea, sent over 100 dishes, mostly dessert Apples and Pears. There was also a very fine lot of the new Physalis Franchetti. Some very good alpine Strawberries, White Grape Currants, and fine fruits of Superlative Raspberry, the best late Raspberry grown, were also staged (silver Knightian medal). Messrs. Paul and Son, Cheshunt, staged 100 dishes of Apples, Ribston, Cox's Orange, Nonpareil, Cellini, Cox's Pomona, Peasgood's Nonsuch and Alfriston being excellent (silver Knightian medal). Mr. Rockwood, Fulwell Park Gardens, Twickenham, also staged 100 dishes of Apples and Pears, kinds well known and mostly mentioned above (silver Banksian medal). Mr. E. Beckett, Aldenham House, Elstree, Herts, staged a remarkable lot of vegetables, the quality being superb—in fact, so many fine dishes are rarely seen in a single collection. Veitch's Autumn Giant Cauliflower was grand, the heads pure white, close and firm. Celery, Kales in variety, Savoys, Cabbages, Coleworts, Telegraph Cucumber (excellent), Student

Parsnip, Artichokes in variety, Scarlet Model and Intermediate Carrots, Perfection Tomato and very good Mushrooms were well represented. The exhibit was well set up and deserved the award given (silver-gilt Knightian medal). Mr. Divers, Belvoir Castle Gardens, Grantham, staged twenty-four varieties of Celery, the best being Major Clarke's Red, Superb Pink, Early Rose, Standard-bearer, Wright's Grove Pink and Man of Kent, with other old kinds such as Sandringham, Gem and Conqueror (silver Banksian medal). Messrs. Dobbie, Orpington, Kent, sent very fine Champion, International and Selected Leeks, very good Kales, beautifully curled; also Parsley and immense bulbs of Ailsa Craig and Sandy Prize Onions, with very fine examples of Selected Parsnips (silver Banksian medal). Mr. Jones, Greenford Place, Sudbury, sent four varieties of Leeks—the Lyon, Ayton Castle, Champion and Sutton's Prize-taker well grown. Messrs. Deverill, Banbury, sent very large Onions—Anglo-Spanish and Ailsa Craig. Mr. Young sent a seedling Tomato. Mr. Wells Lincoln (a cottager), sent three splendid samples of Sutton's Satisfaction, Reading Russet and Windsor Castle Potatoes, well meriting the cultural award given.

Seedling Melons were shown by Mr. Bishop, Westley Hall, Bury St. Edmunds, Mr. Empson, Ampthill House, Mr. Ward, Longford Castle, and Mr. Warren, Gloucester Nursery, Hampton. Mr. Wythes sent Melon Beauty of Syon to test its quality as a late forcing variety, it having been certificated in 1892.

Grapes were shown largely, but the greatest interest was centred in the open-air kinds, a very nice lot having been sent from Chiswick Gardens, the berries good and the quality excellent. Chasselas Noir was fine, also Chasselas Rose and Gamin Noir. A very fine bunch of Black Monukka was also staged and of splendid flavour. Mr. Will. Taylor, Hampton, sent Grape Olga de Wurtemburg from open walls much like Gamin Noir in flavour. Mr. Bradshaw, Hillsborough Castle, Co. Down, Ireland, sent his new seedling Grape Lady Downshire, the berries being oval and amber-coloured, but not in good condition. Mr. Empson staged a new seedling Grape, Mrs. Wingfield, not unlike Madresfield Court, but in flavour a Gros Colman. This was asked to be sent again early in the year. A very fine lot of Red Gravenstein came from Nova Scotia, through Messrs. Nothard and Lowe, Tooley Street, London. These were sent as distinct from the old Gravenstein, being more highly coloured, the old kind also being staged. Mr. Palmer, Andover, sent a seedling from Red Quarrenden, similar, but much later, and of excellent quality. This was desired to be sent later to test keeping.

Seedling Apples were also sent by Mr. Thomas, the Royal Gardens, Frogmore; Mr. Wallas, Leighton Buzzard; and Messrs. Paul, Cheshunt. Mr. Mills, Southampton, sent Blenheim Orange Pippin, a bright red-skinned fruit; this had been treated with chemicals to obtain colour. Messrs. Spooner, Hounslow, sent Apple The Baron, but not equal to older kinds as regards quality. Mr. Hill, Tring Park, Tring, sent very fine fruits of Pear Doyenné du Comice grown on a south wall. Mr. McIndoe, Hutton Hall, Guisborough, sent a new seedling Pear named Charles Ernest. Though of fine appearance, it lacked quality.

A lecture on "Nut Culture" was given by Mr. J. O. Cooper. Unfortunately, the paper was, to our mind, rather marred by botanical information which savoured too much of the ordinary treatise, but Mr. Cooper told his hearers some useful facts. He mentioned that the wood of the common Hazel was used in many ways, for cabinet-making, toys, whip-handles, &c., and those rods from dry ground were most durable. The Hazel would make a good hedge, only Nut gatherers would destroy it by their depredations. It forms an excellent covert for birds, and by its autumn tints adds greatly to the beauty of the landscape. All cultivated Nuts are called Filberts, and the large cultivated Nut was unquestionably an introduction, but at what date is not known, although doubtless first introduced into Kent, where the Nut is most largely grown.

The Nut is propagated by layers, suckers, grafting, and from seed. It does not come true from seed, a slow process too, and is best from layers, a period of twelve months being required for the layers to root well. The tree may be grown on the borders of plantations, in open spots, or in plots when grown for market The ground must be well drained and the trees put 12 feet from row to row, or sometimes growers place them at 24 feet with a row of Apple or other trees between. The lecturer mentioned various other ways of planting, as in squares. A rich, dry loam, well worked, and with a stony or rocky bottom formed the best soil. A very important point is to remove all suckers from the trees, and a great mistake, too, is to let weeds grow on the surface of the soil. The return of Nuts on a plantation of 8½ acres of forty-five years' growth was 2 tons as the maximum and 2¼ cwt. as the minimum. This was in Kent, with Apples and Damsons grown between. The lecturer mentioned, however, that the Damson was not suitable for such culture, because it robs the soil of nutriment, is a prey to green-fly, and the crop does not pay. Mr. Cooper mentioned as especially suitable varieties Webb's Prize Cob, a hardy, prolific Nut and the Nut of the future, Daveyanum and the Duke of Edinburgh.

He also made interesting remarks about the many enemies of the Nut, the nuthatch, squirrel, field mouse, &c. Unfortunately, we lost much of the lecture through the bad acoustic properties of the hall. It is seldom possible to hear a lecture well.

Notes of the Week.

Polygonum Brunonis is one of the best rock plants to give bright colour in the late autumn days, but we never saw so much of it as at Cragside, where there are groups in several aspects, each covering many square yards of rocky ground. It is here most luxuriant and effective in colour with its thousands of erect spikes of red flowers.

A pretty Ipomæa trained to the roof of one of the glasshouses in the gardens at Callaly Castle is flowering well. The plant was sent from the Bermudas and looks uncommonly like the old I. Leari, except that it has large lobed, Vine-like leaves, that are not exactly like those of I. Leari. Its flowers are of a pale blue outside, but inside they are of an exquisitely rich shade of deep blue, with a red vein which makes each division of the flower specially prominent.

Mina lobata would be of little use for outside walls in northern gardens except for those favourably situated, but at Lilburn Tower it is grown in the conservatory and trails about prettily along the front lights, hanging in graceful festoons. It is a plant that always attracts notice when blooming by reason of its singularly forked flower-spikes and the contrasting hues of its rich red buds and creamy yellow blossoms. It is treated as an annual and the plants are grown in pots.

Delphiniums flowering twice in a season.—An incident of this exceptional summer is the sight of a bed of these fine hardy plants in bloom during October. They had borne their usual crop of extra strong spikes, and the great height to which the clumps had grown caused them to get much blown about by wind; this induced the owner to cut them down when the flowers were over, with the result that another display, if not equal to the first, is, nevertheless, a very fine one. —S.

The Sweet Brier flowering in October.—It is not often that autumnal flowers are seen upon our native wild Roses, but the Sweet Brier has been blooming profusely of late, doubtless a result of the phenomenal weather. In the early days of the present month we saw a long hedge of it studded with many fresh pink blooms, the branches as well heavily laden with the scarlet hips from the first flower crop. But for these, the appearance of the bushes was more suggestive of June than October, as there were many flowers open.

An old Peach tree and its crop.—I herewith send you a photograph of a Peach tree in my garden which has borne a wonderfully profuse and good crop this summer. The tree had upon it over 370 fully-developed Peaches, many having been picked before the fruit was counted or the enclosed photograph taken. The tree, which is of the Barrington variety, was planted eighteen years ago against a wall facing almost due west in a garden on a rather steep slope on the top of Widcombe Hill, Bath, and, curiously, the trunk of this tree is almost entirely dead. My gardener had not expected the tree to last through the season on account of this rotten state, and therefore did not take the trouble to relieve it of any of its abundant promise.—V. W., *Bath.*

Desfontainea spinosa.—One would hardly expect to find this beautiful shrub growing and flowering freely in the heart of Northumberland. We have just seen several fine healthy bushes studded with flowers in Lord Armstrong's delightful garden at Cragside. This shrub, however, is not hardy here, but it receives full exposure throughout the summer and autumn months. The bushes are growing in a border in front of a wall, against which a lean-to glass erection has been built, but all the glass-lights are taken away during summer. This and several other equally beautiful half-hardy plants are thus grown and flowered to perfection, and they worthily deserve such careful attention. No shrub of the present time is so showy in blossom. Some of the finer bushes were 5 feet in height, a dense mass of spiny Holly-like leaves, which make a fine setting for the large tubular red and yellow flowers.

The weather in West Herts.—A week of changeable weather. On the 10th the temperature in the shade at no time rose above 52°, whereas two days afterwards the highest reading was 60°. Again, on the night preceding the 11th the thermometer on the lawn showed 4° of frost, but during the following night it never fell lower than 42°. Both at 1 foot and 2 feet deep the temperature of the soil now stands at 54°, and at the former depth is rather more than 3° above the October average. There were four fine days during the week, but the fall of rain since the beginning of the month has been heavy even for October, amounting altogether to nearly 2½ inches.—E. M., *Berkhamsted.*

Names of plants.—*A. N.*—Grass: Melica uniflora.——*Alpine.*—1, Clerodendron trichotomum; 2, Buddleia Lindleyana; 3, Cistus albidus; 4, Caryopteris mastacanthus; 5, Cistus, too poor to name.——*Ignorant.*—2, Tolpis barbata; 4, Sisymbrium Millefolium.——*P. E.*—1, Oncidium incurvum; 2, Epidendrum prismatocarpum; 3, too shrivelled; 4, Oncidium Forbesi——*L. H. S.*—1, Adiantum pedatum; 2, Nephrodium molle; 3, Selaginella Martensi; 4, Selaginella cæsia.——*W. Eastwood.*—A remarkably fine spotted form of Odontoglossum crispum. You ought to show it to the Orchid committee of the R.H.S.

Names of fruit.—*A. B.*—1, Egg, or White Paradise; 2, Golden Noble; 3, London Pippin.——*J. B.*—Probably Sturmer Pippin.——*H. T. Balfour.*—Norfolk Beaufin.——*J. D. C.*—1, Hawthornden; 2, not recognised; 3, Norfolk Beaufin; 4, small Lane's Prince Albert; 5, not recognised.——*H. W.*—1, Marie Louise; 2, Louise Bonne; 3, Duchesse d'Angoulême; 4, Glou Morceau; 5, Uvedale's St. Germain; 6, Hollandbury; 7, Hawthornden; 8, Court Pendu Plat; 9, Hanwell Souring; 10, Gloria Mundi; 11, Blenheim Orange; 12, not sure of.——*W. E. Anderson.*—1, 3, 5, Fearn's Pippin; 2, Sturmer; 4, Royal Russet; 6, not recognised; 7, Emperor Alexander; 8, Blenheim; 9, Pear Eyewood; 10, Pear Van Mons Leon Leclerc; 11, not recognised; 12, Pear Souvenir du Congrès; 13, Pear Easter Beurré; 14, Hanwell Souring; 15, Hoary Morning; 16, Pear Hessle; 17, Sturmer; 18, Northern Greening; 19, Pear Beurré Rance.——*T. A. D.*—Blenheim Orange.——*R. C. Coode.*—Apple Golden Noble.——*W. Lisney.*—Nouvelle Fulvie.——*A. R. Wafar.*—1, not recognised; 2, Catshead; 3, Lane's Prince Albert.

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"This is an Art
Which does mend Nature; change it rather; but
THE ART ITSELF IS NATURE."—*Shakespeare.*

ORCHARD AND FRUIT GARDEN.

STRAWBERRY GROWING ON ALNWICK MOOR.

A LARGE tract of exposed land on the outskirts of the town of Alnwick is divided up into lots and vested in the working-men freeholders of the town, who are each entitled to 1 acre. Strawberries having been found to do well, the growth of this fruit is becoming quite an important industry. One of the largest growers is Mr. Rickaby, who now has about 4 acres of ground entirely cropped with Strawberries, as, in addition to his own freehold, he rents the adjoining plots of others who prefer to let them. We lately had the pleasure of inspecting these Strawberry beds in the company of their owner, who, although quite an amateur in gardening matters, and whose lines of culture are altogether different from those pursued in the south of England, has certainly met with remarkable success, so much so, that the area devoted to Strawberries is being extended each year, other freeholders following his example. The place is fully exposed to the north-east winds, which sweep across the tract direct from the sea with nothing intervening in the few miles to break their force. In consequence of this the Strawberries are late, and their backwardness is without a doubt a contributory cause to the profitableness of the undertaking, as they ripen when the southern supplies are nearly or entirely over, and find a ready market in Newcastle, from which place considerable quantities of the fruit are sent further south. Instead of confining the plants to rows, as is generally done, they are here allowed to run together and entirely cover the ground. Mr. Rickaby maintains that in this way the plants shelter one another and do much better than when each is restricted to an isolated tuft. The soil is fairly stiff and suits Strawberries well, although it is shallow. Some of the best beds we saw were on the site of an old brick field, and there is a good quantity of burnt earth incorporated with the surface soil, which suits the plants. Deep cultivation, however, is essential previous to planting, and the ground is trenched up fully two spits deep. If the ground has been well prepared in this way the beds will stand a long time provided there is a little surface feeding each year. We saw some beds that were in their eighth year, and they were a perfect sheet of deep green leaves without an inch of bare ground or a weed visible. The crops from these beds had been as good this year as at any time since the plants were put out. New beds are formed in the spring of the year, so that the plants may have the entire season before them in which to establish themselves. The plants are put out thickly in the rows, which are about 2 feet apart. Plants that were put out only this spring had already nearly filled the intervening spaces with rooted runners. The varieties at present chiefly grown are the old Vicomtesse, here called Garibaldi, Marshal MacMahon, which Mr. Rickaby finds the best of all in that district, President and Sir Joseph Paxton. Noble has been tried, but did not succeed, and we saw a fine batch of Royal Sovereign just received to test next year. The latest kinds that are grown in the south do not come to perfection, as, for example, Latest of All and Elton Pine. Another good grower on a smaller scale, and who first informed us of the existence of these Strawberry gardens, is Mr. Purvis. Some of his plants of this season's planting had made a very fine growth. He had Aberdeen Favourite on trial, and was favourably impressed with it.

Yellows in Peach trees.—This is a malady too well known amongst Peach growers, and a source of much disappointment, apparently quite healthy trees suddenly turning from a healthy green to a sickly yellow shade. Some soils seem to favour the disease more than others, the worst cases I have met with having been on strong soils retentive of moisture. In such the roots of the current year do not mature in autumn, especially should such be dull and sunless, and the effect is seen the following summer. Biennial, or at the most triennial, lifting of the roots is the only means in such cases of keeping the yellows in check, adding a large percentage of old mortar rubble, charcoal, or the sweepings of walks and drives, raising the soil also above the ordinary level and not covering the roots more than 3 inches deep. If this is done, say in October or during the early part of November, according to the varieties, just when the foliage is assuming a yellow tinge, and a mulching of leaf-mould or old Mushroom bed manure applied to protect the newly-disturbed roots from frost, a more healthy and better coloured growth will generally follow in spring. A little soot mixed with the soil is good in cases of yellows. When trees are replanted thus shallow, a good mulch of manure ought to be placed over the surface the following spring and occasional copious waterings given, or drought will be liable to affect them, and the trees consequently go from bad to worse. Some varieties of Peaches and Nectarines, notably Hale's Early and Lord Napier, are much more subject to attacks of the yellows than others, and I believe that, owing to the increased demand for trees now-a-days, unsuitable stocks are often employed, as it is well known that the stock that suits one Peach or Nectarine is often unsuitable for others. My advice is always to plant on stations so as to prevent the descent of strong tap roots, and in strong soils raise the borders, use plenty of correctives, lift every third year, and in order to counteract the evils of drought, mulch well and feed liberally.—J. CRAWFORD.

Salway Peach.—This old yellow-fleshed Peach is seldom met with now-a-days, but it is well worth growing on the back wall of a cool orchard house to ripen in October. It is naturally so very late that, even in Berkshire and under the influence of an average summer's sun, it is generally the beginning of November before it is quite ripe. If given the shelter of a cool house, the flavour is much improved; indeed, is preferable to that of some of the more popular late sorts, such as Lord Palmerston. A well-ripened fruit of Salway is very handsome, the mixed colours of yellow and bronzy red giving it an attractive appearance. Salway generally sets a fair crop of fruit, as, being later in coming into flower, it is not subject to so many cutting winds as the earlier varieties. All things considered, I consider it to be well worth a place in a late house if room can be spared.—J. C.

Good late Peaches.—There is a very gratifying improvement going on annually in outdoor Peach culture as compared with that of a dozen or more years ago. No doubt bad seasons accounted for some of the failures, but I think the system of cropping the borders with vegetables almost close up to the trees was one of the causes of non-success, especially with the later sorts, which were robbed by the crops, and frequently had their roots disturbed by lifting whatever was planted on the borders at a season when the trees and fruit required all the assistance they could obtain. By allowing more ground for the trees to root in undisturbed and a more liberal diet, with other good cultural attention, magnificent fruit is produced that will equal that grown under glass. Golden Eagle is a particularly fine variety for late supplies either under glass or outside, ripening well and acquiring a beautiful golden hue, which has a telling effect both on the dessert and exhibition table. The flavour is also excellent as compared with that of some of the late sorts. Princess of Wales attains a large size both under glass and in the open, the pale colour of the fruit on one side with the delicate red flush on the other giving this Peach a very handsome appearance. Like Golden Eagle, it is a vigorous grower and bears freely. Walburton Admirable is a grand late Peach in most districts where this fruit succeeds on the open walls, but in some few instances I have known it to be unsatisfactory, ripening indifferently, though other late sorts on the same wall did well. Where it answers it well deserves a place, as the tree is very prolific and the fruit large, of high colour, and good flavour. Another variety not so late as the three sorts named is the old Bellegarde. Magnificent crops of large, deeply-coloured and rich flavoured fruit are borne on warm walls, and in my estimation it is one of the most reliable late Peaches grown. Of late, many complaints have been raised as to the low figures realised by early and midseason Peaches, and it is probable that more attention will be paid to the later sorts, as being more profitable. At the end of September and early in October fairly good fruit of Golden Eagle and Princess of Wales realised 9s. per dozen, and the fruiterer would no doubt charge double that figure for the same Peaches.—W. G. C.

Coarse Pears.—In the Pear classes at exhibitions, especially those connected with the R.H.S., it would be well to have a class for quality alone. There is no merit in growing Pears to a large size. Anything that can be got big seems now to be the order of the day. These big Pears are misleading to the general public, and exhibitors can hardly be blamed, as they naturally show what are likely to please the judges, well knowing that if they only selected for table quality they would not find a place in the prize list, let alone take the leading prize. I wonder how many of these big, coarse Pears find their way to the grower's employer's table. Not till there are classes set apart for quality alone will there be any improvement. A big, coarse Pear is the worst of all fruits, big fruits of other kinds not showing such a difference in quality.—Y. A. H.

PACKING PEACHES.

I WAS pleased to see the comments of "S. W. F." (p. 274) on the recent fruit packing at the Crystal Palace show, and especially that relating to Peaches. The reason also why the Peaches packed in Moss got into the prize list it would be well to know, as Moss is not at all a desirable material for successful Peach packing. The many boxes which I have seen of Moss-packed Peaches which had been sent to Covent Garden Market had anything but an enticing look. The reason probably of there not being an entry packed with paper shavings is on account of the difficulty of securing this material in a condition suitable for the purpose. I have used a large quantity for packing Peaches for Covent Garden Market, and wish for nothing better, only it is so difficult to get a regular supply. For packing during very hot weather paper shavings are the best, the fruits lying cooler than when wood-wool is used. My preference for soft tissue shavings does not, however, lead me to speak in disparagement of wood-wool, as this is an excellent substitute, being wonderfully cheap and easily procurable, the fruits turning out very clean. In these days of further enlightenment on fruit culture and packing one need wonder why anyone should use short dried grass for Peach packing, as this is as bad as it can well be.

It is possible to command excellent prices in Covent Garden Market for sound and good Peaches well packed; so growers, if they produce good fruit and packed so that it reaches the sales-

man in fine condition, need not fear being outdone by the foreigner, as was prognosticated a year or two back. My last consignment of Peaches this season—and these Sea Eagle from the open wall—fetched 18s. per dozen. This, I may say, is the best price I have ever had for open-air Peaches. Eight shillings, ten shillings and twelve shillings are, however, common prices. I quite expected after the published reports of the large Peach crops generally that prices would rule low, but they have not, as results have proved. Of course the fruits have been well developed and highly coloured. If only six shillings or eight shillings per dozen on the average were received for open-air Peaches, there would be an excellent margin of profit. Y. A. H.

Apple Mere de Menage.—This is one of the best Apples that I know to plant as a standard, as it is a vigorous grower, quickly forming a large head, and will commence to bear in a few years from time of planting. In about twelve years the trees produce heavy crops of large Apples of brilliant colour that can always be sold at fair prices, or they can be stored for several months for private use. Another advantage, as compared with other varieties, is that the fruit is not blown down by rough winds to any serious extent. During the recent gales a number of young standard trees heavily cropped scarcely lost any fruit, and they are now a picture, the bold red fruit being conspicuous for a long distance. Grown as a bush or espalier tree, Mère de Ménage produces fair crops of fine fruit, but it is not one that I should plant with a view to profit, as there are so many others that are far more prolific in a restricted form of growth. If exhibition fruit is required, the finest fruit is borne by these restricted trees. Some of the largest and best formed Mère de Ménage I ever had were grown on a small wall tree, the Apples acquiring a delicate bloom never seen on fruit from trees in the open, but when I exhibited them in competition I was disqualified, as the judges considered they had been grown under glass. Since then, if I have staged any Apples grown on wall trees, I have stated the same on the label bearing the name of the variety.—W. R. H.

Late flowering of Apples.—At Ham House gardens Mr. Sage drew my attention recently to the vagaries of Apple trees in producing abnormal bloom. A Worcester Pearmain tree that was transplanted last winter had produced fruits that were then about one-third developed, a Yellow Ingestre that had not been transplanted had embryo fruits set, and in two other cases clusters of flowers were numerous on the trees. These clusters and fruits were in all cases on the point or extreme buds. A few varieties of Apples fruit from these points naturally, and such ones may next year be so far fruitless where point buds have this autumn flowered. Probably very little harm generally is done, especially that spur-buds seem in no way affected. The case, however, seems to evidence undoubted structural differences between spur and point buds.—R. D.

The heaviest Apples.—I think it is a decided mistake and waste of money to offer prizes for the heaviest Apples, for I cannot see that it promotes good culture or advances the cause for which the societies are formed. In fact, I think it does positive harm, as it perpetuates the growth of varieties that would otherwise be discarded altogether and that have nothing but size to commend them. I find on looking over my Apples that the heaviest are those borne by Gloria Mundi, of which I have two trees, that are easily distinguishable from all other varieties by coarse, rampant growth and foliage of great size. During the last ten years these trees have never borne anything like a crop, but they almost invariably have a thin sprinkling of fruit that beats in weight that of the other sorts that do carry crops. Some of the largest are between 17 oz. and 18 oz. in weight, and if there were good prizes offered in this locality for the heaviest dish of Apples it might answer my purpose to let them remain. As it is, the trees will be headed down directly the leaves drop and re-grafted with some good all-round sort. I am a great admirer of large Apples, but I want them to have other good qualities as well.—James Groom, *Gosport.*

Apple Kerry Pippin.—The rage for size and colour seems to be so much on the increase, that smaller and less attractive Apples like Kerry Pippin are in danger of being almost neglected. For private use there is no comparison between, say, Worcester Pearmain and Kerry Pippin; the former is unquestionably the more valuable variety for sale, but the latter is infinitely superior in flavour, and is just the size most people like for dessert. As a bush tree this variety is very prolific, rarely failing to bear a crop, and on a light, warm soil the fruit attains a lovely colour on the sunny side. Very few varieties of Apples will equal this for flavour in its season—September, and any intending planters will do well to add this delicious little Apple to their collection. —W. G. C.

Apple Hormead's Pearmain.—For a number of years I have been watching a standard tree of this variety growing in the garden of one of my labourers. This garden runs down to a river bank, and the tree is not more than half a dozen yards from the stream, yet in spite of this almost every year it is heavily laden with fruit, frequently carrying a big crop when other trees on higher ground are a failure. Such a fact would appear to upset the theory that high ground above the fog line is most suitable for Apple culture. While always advising orchards to be situated on high land, I must acknowledge to having been puzzled to account for the good crops produced on a tree that has to be enveloped in fogs almost every morning while in bloom. It may be that Hormead's Pearmain is specially suited for growing in low-lying positions, or is it that the fog acts as a protection to the blooms, thereby saving them from injury by spring frosts? However, apart from this question, Hormead's Pearmain is a valuable Apple for spring use, as it keeps sound up to the end of April, and is an excellent cooking sort as well as a fair dessert fruit. In whatever form the trees are grown they are remarkably prolific. In seasons when the Apple crop is light the fruit sells at good prices, but the greenish colour is against it in seasons like the present one when Apples are plentiful.—R. H.

OUTDOOR GRAPES.

Can Mr. Cornhill give any information respecting the character of the Vine from which come the Valencia Raisins of commerce? Is it of such hardy nature as to warrant any attempt to grow it outdoors in Surrey? I have found a large number of seedling plants to come up on a little border under a wood fence on the warm side of my back yard here, evidently from pips of the Valencia Raisin; and as where other things thrive so poorly they seem to thrive so well, I am proposing to presently plant a few of the strongest close to the boards, adding a little manure to the poor soil so as to encourage growth. I cannot say how long the pips may have lain on the ground before germinating; possibly several months. The yard is a very warm one during the summer up to 4 o'clock, but later is greatly shaded by the house. Still, the fence of close boards 6 feet in height has a south aspect. Even if these Vines do not in time produce fruit, at least they may form a pleasant green covering to close tarred boards, and even in the autumn give some charming colour. To furnish leaf colour on walls or fences I have found none better than Madresfield Court, and even the berries have come of good size and fairly well coloured on a south wall in Middlesex. Obviously for outdoor culture to secure nice, sweet, edible Grapes we need not only hardy, but precocious varieties. The common fault of most outdoor Grapes is that, because of the cool conditions under which grown, the bunches become solid clusters, keeping the berries very small and imperfectly developed. Could we but find some varieties that would give fairly loose bunches which needed no thinning, then the gain would be considerable if the berries finished well. The best for this purpose I remember, and it used to fruit admirably on a south wall forty-five years ago in Hampshire, was the Dutch Sweetwater, the bunches rather short, but the berries of good size and not thickly set. It would be folly to suppose that thinning outdoor Grapes would repay for the labour required, especially when we can purchase fairly good home-grown house Grapes at 1s. per lb. and capital Spanish Grapes at 6d. per lb. I have observed that Mr. Fenn still grows both Royal Mascadine and Esperione Grapes on the warm end of his farmhouse at Sulhampstead, partly under glass and partly exposed on the open wall, but then he grows only for wine production, and it would seem as if acidity was in that case as important an element as saccharine. There are, however, many secluded or rural places in the kingdom, and in its southern part especially, where shop Grapes, if ever so good and cheap, are not obtainable. There, too, may be found plenty of house or cottage walls on which with proper culture and good varieties fair Grapes may be produced in warm seasons that would be a long way better than none at all. No doubt in the majority of cases Vines are grown outdoors more for the sake of summer ornament than for fruit production. Most likely, too, Apricots and Pears on warm aspects are more profitable and satisfactory croppers. Still, something may be granted to the picturesque, and certainly few things tend to that feature so fully as do Vines on houses and cottages in rural districts. A. D.

PLANTING FRUIT TREES.

Everyone who has experience in planting fruit trees is well aware of the great advantage gained by early planting, say from the end of October to the end of November, provided the land is clean and ready to receive the trees. The importance of having all necessary preparations for planting made beforehand can scarcely be over-estimated in the future. The land is often badly drained, foul, or unsuited for fruit culture. Again, aspect is not sufficiently studied in many instances. I could point out a plantation where a large sum of money has been expended in working the land, draining, fencing from rabbits, and planting with fine trees, but the whole will probably be a dead loss to the proprietor, because the aspect is due north, with a sharp slope of the land in that direction. Many landowners and others are planting fruit trees with a view to profit, and it cannot be too strongly pointed out that if they wish to obtain a good interest on their outlay, the conditions must be favourable for the success of the trees, and all cultural details be of the best and most practical description. It is sheer folly to plant good varieties of fruit trees on land that will not produce decent timber, yet this is occasionally done, and then the planter raises a lamentation that this climate is unsuitable, and fruit production overdone in this country, as the supply greatly exceeds the demand, further adding that foreign competition is ruining the industry. No doubt the low prices that have prevailed this season for fruit will be quoted as a proof of the same, but it is only a case of the grower making up his mind to grow only the best sorts on suitable land with proper attention, and far different returns will be realised than it is possible for ordinary cultivators to obtain. This brings another important feature before intending planters, viz., to avoid planting any great quantity of early sorts of Apples, for the reason that in prolific seasons the supply of the same is fully equal to all demands, and that supply is likely to be further added to in the near future by the trees already planted as they increase in size and bearing powers. By planting such varieties as Lane's Prince Albert, Bramley's Seedling, Dumelow's Seedling where it succeeds, and other sorts of that class which can be stored and kept until late in the spring, when both home and foreign supplies are practically exhausted, high prices

then can be secured for sound, well-grown fruit. The only Apples that I have made really good prices of early this season are White Transparent and Worcester Pearmain; in spite of the gluts these sold at high figures, and it may be worth while planting these two sorts for some time yet. The former is valuable for its earliness—end of July—good size, attractive appearance, and freedom in cropping. The chief recommendation of the latter is the high colour and prolific habit, causing it to sell well in manufacturing centres. For private use the case is different, as early, mid-season, and late Apples are a necessity, and the choice of excellent varieties is now so good, that with a proper fruit room there is no difficulty in ordinary seasons in having a supply of good fruit all the year round. Amongst reliable sorts the following have proved good, especially when grown in bush form: *Dessert*—Beauty of Bath, Devonshire Quarrenden, Lady Sudeley, Kerry Pippin, American Mother, Cox's Orange Pippin, Ribston Pippin, Egremont Russet, Roundway Magnum Bonum, Baumann's Red Reinette, Allen's Everlasting, and Sturmer Pippin. *Cooking*—White Transparent, Duchess of Oldenburg, Lord Suffield, Ecklinville Seedling, Golden Spire, New Hawthornden, Warner's King, Bismarck, Lane's Prince Albert, Bramley's Seedling, Alfriston, and Dumelow's Seedling. This list has enabled me to provide good fruit all the year round for my employer's table, but it might possibly need some little alteration to suit different districts, as local influences affect varieties to some extent.

Turning to Plums, we again find too many varieties grown by market men. According to my experience, Early Prolific and Victoria are still the most profitable, but it is a question if the latter will be able to maintain its position, owing to such vast numbers being planted. It is very probable that Monarch and Grand Duke will prove more remunerative, as they are both strong growers, free bearers, the fruit large, heavy, and of a pleasing colour. Another good feature of both varieties is that the trees appear to crop equally well as cordons, bushes, or standards. Archduke is another promising late Plum that has answered well with me for three years, and one that I should include in making a new plantation. Amongst varieties of Plums for a private garden in addition to those already named I would include Kirke's, Jefferson, Coe's Golden Drop, Denniston's Superb Gage, and Old Green Gage.

In Pears for market, only those sorts that attain a good size and handsome appearance will fetch top prices; they may be of inferior flavour to smaller and less attractive varieties, but as money is the object, flavour must take a second place to appearance. One of the best quality handsome Pears is Durondeau, and the tree crops well most seasons whether in bush or other form, the fruit always realising a satisfactory price. Clapp's Favourite is another handsome large Pear, of moderate quality, and selling well in its season—August. Young standard trees have borne very heavy crops for several years. Louise Bonne of Jersey should be grown by all Pear lovers, as its flavour is delicious, the fruit of fair size and lovely colour, and the tree remarkably prolific in all forms. Pitmaston Duchess is well known for its size and value for market. On a deep and good soil this variety produces very heavy fruit in large quantities both on bush and standard trees, but on high trees much of the fruit is marked by winds blowing it against surrounding branches, or is knocked down and considerably bruised. The larger the fruit, the more danger there is of injury from gales with both Pears and Apples. Beurré Hardy and Marie Louise d'Uccle are both good vigorous growers and very prolific varieties, producing large fruit that commands a reasonable value in the market.

A longer list of names might be given, but it is always advisable, in starting to plant fruit trees for market, first to discover which sorts answer best in the district, and then to only choose a very limited quantity of varieties of each kind, thus enabling the grower to place repeated supplies of the same upon the market in bulk.

W. G. C.

PRUNING RASPBERRY CANES.

I have been somewhat surprised of late at some of the views prominently advanced on the best mode of pruning Raspberry canes. To prevent confusion it is needful to make it clear that here I chiefly limit my remarks to the pruning or cutting back of summer-bearing Raspberries. There is a general agreement that the bearing wood of the current season can hardly be too soon cut back to the ground level so soon as the fruit and wood are fairly ripe. Early winter or autumn pruning is also generally preferred for autumn-bearing Raspberries. The pruning, to be perfectly efficient, consists in cutting back all growth to the ground line. Simple as this seems on paper, not a few fail to practise it in the garden or orchard, hence the common name of double-bearing Raspberries, which could never have originated or been conserved until this October had no previous years' canes been left to fruit in the early summer side by side with the usual summer-fruiting Raspberries. To have the heaviest crops of autumn-bearing Raspberries no shoots should be allowed to fruit on the stools, only such as have been grown during the current season. The pruning of summer-bearing Raspberries has a threefold character; first, as we have seen, the shoots that have borne fruit should be cut down level with the ground as early as possible. The next point is the thinning of the current year's shoots. The fewer in reason left to a stool the stronger; hence the importance of early and severe thinning of the current year's canes. From three to five canes to a stool will mostly be found ample, though much depends on distance apart, character of soil and climate, modes of training, &c. The time of thinning the canes of summer-fruiting Raspberries should begin in the days of suckerhood and be continued through the growing season, so when the dual season of maturity of fruit and wood arrives, no more nut-brown canes may be found than ample space may be found for around the stools or against the espalier rails. Now we reach the final pruning of Raspberry canes in the ordinary sense. This has consisted in the shortening back of the next year's fruiting canes to two-thirds, more or less, of their natural height from the ground. The mere height of Raspberry canes is of less moment than appears at first sight, and it is not my intention to lay down any hard and fast line as to heights of fruiting canes or distances between. The question deserving serious consideration is, whether to cut or not to cut the heads of summer-fruiting Raspberry canes. For centuries cultivators have almost been unanimous in their advice to cut the heads off them with a firm hand. I do not say that use and wont make this or any other horticultural practice right. It furnishes, however, a strong presumption in its favour. Besides, general experience proves that few summer-bearing Raspberry canes can or will fruit from base to summit if left full length without cutting back. Even with severe pruning there is mostly a considerable proportion of the base of the cane that does not fruit. Suppose we cease cutting back the tops, we of necessity lengthen the run of barrenness or of inferior fruit from the base of the cane upwards. As neither Nature nor art can compel long unpruned Raspberry canes to fruit over their length, the next best course may consist in making a selection of the best part of the canes for fruiting. That part is seldom found at the base, hence too hard cutting back would be a mistake. It is never found on the crown of summer fruiting Raspberries; therefore, to leave the cane intact is a more serious mistake still. Skilful cutting back forces the mid-portions of the canes to fruit, which is without doubt the best bearing wood and yields the most uniform samples. Besides, unless Raspberries are all to be trained in various ways or supported by trellises, fences, walls, or arches, they must be shortened or pruned back to keep their fruit from being soiled by stress of wind or weather.

Thus were the fruiting capacity of Raspberry canes of uniform quality throughout—which they are not—or had their crowns been as much superior as they are undoubtedly inferior to their centres in uniformity and potency of fertility, even then economy and convenience in growing, security and gathering would suggest an enforced shortening back or pruning.

Nature herself indeed furnishes the cultivator with his most vivid object-lesson in this direction. The late growths of the young canes lay them open to severe attacks of winter and spring frosts, and in nine seasons out of ten Nature prunes them back more or less severely. Hence most cultivators gave the final cutting back to their summer-fruiting Raspberries late last February after they saw how much of the canes Nature had left safe and sound. Thus the last touch of the knife often becomes a dresser of frozen tissues and a short cut to healing and health.

D. T. F.

Outdoor Figs.—I, like "Gwent" (page 235), wonder why the Fig is not more commonly grown in the open air. For the past seventeen years I have had a fair crop, but nothing like that of the present year, Brown Turkey being the best. I live within 100 yards of the sea, and the trees get all the western gales, which are very fierce. I never unnail a branch and use no covering whatever. Of course, we do not get so much frost as you do in England.—John A. Colthorpe, *Summerville Gardens, Waterford.*

Languishing Strawberries.—Previous to the much desired rain a bed of Strawberries planted less than three years since was suffering so much from want of root moisture as to flag very badly under the tropical sunshine of September, notwithstanding the soil in which they are growing is unusually deep and in good condition as regards manure. The bed under notice is planted with four varieties. That which seemed to suffer most was Vicomtesse H. de Thury, while Laxton's Noble in the same border did not show any sign of languishing. To give the plants relief by watering was out of the question, for we had but a short supply for the daily routine of watering. Mulching would necessarily have been resorted to in the event of a continuance of such summer-like weather.—W. S.

Peach Walburton Admirable.—Unlike last season, when the quality of this fine Peach was very poor on account of the comparatively sunless season, this year, thanks to the fine autumn, it has been grand. We cannot hope of course for a succession of fine autumns, but, taking two seasons out of three on the average, we can rely upon its ripening up well. Anyone who can devote a space on a south wall to a tree, except in the more northern districts, should certainly plant this, the grandest of all late Peaches. Where Peaches will do well, several trees on a south wall both of this variety and Sea Eagle would prove a profitable investment. This year I could have sold any quantity at 10s. per dozen—not a bad price for open-air Peaches in such a generally fruitful year. With adequate feeding and thinning out to a fair distance apart, also exposing as much as possible to direct sunlight, the fruits individually swell up to a large size.—A. Young.

ORCHIDS.

PAPHINIAS.

The number of species in this genus is not large, but it comprises several very interesting and pretty Orchids that well repay the trouble needed in their cultivation. They are all natives of South America, and are small-growing pseudo-bulbous plants of a clustered habit of growth and epiphytal. Their culture is by no means difficult, the chief trouble being usually caused by insects, notably black and yellow thrips. It is too often thought that the presence of insects on plants of any kind denotes careless treatment, and though the plants may, by being badly grown, be predisposed to their attacks, there are some that seem to defy the best attention that can be bestowed on them. It is of course in the atmospheric treatment that we are most at a loss in the culture of these plants. No doubt if the same amount of air could be afforded them as they obtain naturally, there would be little cause for complaint, but this is for obvious reasons impossible. Heat they must have, also moisture in abundance, and it is quite out of the question, therefore, to open the ventilators when, for instance, a cold east wind may be blowing or the external temperature is very low. The air in the house then cannot be changed as often as necessary, and the foliage, not being so well hardened, becomes an easy prey to the insects. Fumigation, sponging and other remedial measures have then to be resorted to, but these, again, unfortunately weaken the plants, for it is the sensitive nature of the foliage that renders the plants so susceptible to injury from slight fluctuations of either heat or moisture. For the same reason Paphinias cannot endure bright sunlight, and heavy shading has to be applied during the summer. They all like a light position, however, and are best suspended as near the glass as possible. The best plants of Paphinia cristata I ever saw were grown in a house largely devoted to Phalænopsids, and which was in consequence very carefully looked after as regards ventilating and shading. Shallow pans, rafts or baskets may be used for these Orchids, according to convenience, but in whatever they are grown the drainage must have very careful attention. This is of the utmost importance, for the roots will simply rot wholesale in a sour or water-logged compost. For the same reason this latter must be very carefully prepared and only the best material used. The best mixture consists of equal parts of peat fibre, chopped Sphagnum Moss, and mellow fibrous loam, the whole being kept in an open condition by a free admixture of potsherds and charcoal. If the best results are to be obtained, it will be necessary to repot about once in two years, and possibly a little of the surface will require renewing annually. By this means the roots will always have a little sweet and open compost to run in, and the freedom with which they extend under the circumstances is the best recommendation of the practice. The best time for repotting or top-dressing is the early spring, as at this season the plants begin to grow, and from this time until the flowers are past and the growth finished up they must have a liberal supply of water at the roots. Afterwards a little less will be needed, but they must at all times be kept moist. It is not unusual for

P. cristata to grow, as it were, out of season and push new growths late in the autumn or winter, and when this occurs the water supply must be increased and the plants encouraged as much as possible. This species bears from two to four flowers upon a scape, each being nearly 3½ inches across; the sepals and petals are broad at the base and pointed, cream-white in ground colour, which is hardly discernible on account of the number of spots and blotches of rich chocolate that cover it. The lip is very singular in form, the side lobes being claw-shaped, the front almost triangular, with a whitish downy point. It is an old and widely distributed species, having been introduced from Trinidad in 1834.

P. grandis is a handsome kind, producing short scapes of about three very large and prettily marked flowers. The sepals and petals are whitish with large blotches of purple, the lip being similar to that of P. cristata in shape, with markings of deep purple and brown.

P. rugosa may be described as a small flowering and growing form of cristata, but the markings on the segments are dull purple. There are two varieties of this plant, the better one being that sometimes known as P. rugosa Sanderiana. H. R.

Cattleya labiata var. Lowiæ. — In your issue of last week, in the list of awards of merit given by the R.H.S. on Tuesday last (page 308), we notice the omission of any reference to our white Cattleya labiata var. Lowiæ, which received an award of merit.—H. Low and Co.

Odontoglossum crispum Trianæ.—Although eclipsed in size by some of the best forms, this pretty variety has a distinct and effective appearance. A plant now in flower has but few spots on the sepals and petals, but these are of a reddish brown, quite different from the ordinary type. The petals have a faint line of rose colour on each, and the lip is broad and heavily spotted.

Epidendrum ellipticum.—This very free-blooming Orchid is deserving of more extended culture, for the flowers last in good condition and the plants bloom for five or six months out of the twelve. It is an erect growing species, with stems on the strongest plants as much as 5 feet high and clothed nearly to the base with leaves. The flowers are produced on pretty paniculate racemes from the apex of these and vary in colour from a soft pink to deep rose. Epidendrum ellipticum is a vigorous grower and must have a fairly large pot filled with peat and Moss, keeping it well supplied with water all the year round. It thrives best in a light sunny position in the Cattleya house.

Dendrobium Jamesianum.—Like others of the nigro-hirsute section, this frequently gives us a few flowers in autumn, and they are very welcome just now. They are mostly produced from the old pseudo-bulbs and are not equal to the more naturally-produced blossoms that occur in spring. D. Jamesianum seems never entirely at rest; it is either flowering or growing all the year round, and should be treated accordingly. It thrives best in small pots only just large enough to take the plants easily, and a thin surfacing of compost is all that is required. It may be grown at the cooler end of the Cattleya house or with the Odontoglossums, great care being required to keep the growth free of insects if it is afforded more heat.

Imported Odontoglossum crispum. — Among a number of imported Odontoglossum crispum bought about five years there was a plant which when established showed distinct looking pale green leaves, *i.e.*, paler than those of O. crispum usually are. It has never flowered. The plant is in fine health; the bulbs have increased in size. I have tried keeping it near the glass, starving it, when the growth of the bulb is completed, without success. Can you suggest what is wrong? All my Odontoglossums grow well and flower well.—W.

*** It is rather difficult to know what to advise in your case, not knowing what your plant is, as several species have certain peculiarities about them in their manner of flowering. There are several species that are frequently imported with O. crispum, including the many forms of O. glorioşum, any of which it may turn out to be. O. vexillarium, too, comes from the same locality, but it is hardly possible to mistake this, or to keep such a free-blooming Orchid so long without flowering it. A plan I have often tried successfully with cool Orchids that are slow to bloom is to allow rather more warmth when they commence to grow, getting the pseudo-bulbs finished up as quickly as possible, and then somewhat suddenly lowering the temperature again and keeping the plants dry at the root. They will then usually push flower-spikes, and as soon as these are seen the plants may be treated in the usual way. This is certainly worth a trial, and if by this means your plant is induced to bloom and you send a flower, more definite instructions as to its treatment can be given. It is useless drying the plant after the new growth is seen to be starting, as this only serves to weaken it without any advantage.—Ed.

Odontoglossum Coradinei albidulum — The flowers of this pretty variety are much lighter in colour than in the type, and quite equal in size and other respects. The very light primrose sepals and petals are narrow, with blotches and spots of brownish red, and the lip is nearly white, with a large blotch of brown. The typical plant is said to be a natural hybrid between one of the broad-petalled group and a narrower species, such as O. glorioşum, and is an autumn-flowering species of much value. It thrives well in small pots in peat and Moss at the warmest end of the Odontoglossum house, and should never be dried off. It is a native of New Grenada, and was introduced in 1872.

ONCIDIUM FORBESI.

Among the many beautiful and free-blooming species contained in this favourite genus, few can compare with this, and certainly none can beat it at this season. The flowers are large and showy and produced freely upon the erect branching spikes. They are each upwards of 2 inches across, brownish in ground colour, with a narrow broken margin of bright yellow, the whole flower very bright and glossy in appearance. The pseudo-bulbs are oval-flattened and bear two or three light green leaves, from the axils of which the flower-spikes spring. O. Forbesi can hardly be called an easily-grown Orchid, as its tendency in many cases is to produce smaller pseudo-bulbs yearly until the plants are too weak to flower, and consequently become of little value. This, however, is more often than not the effect of over-flowering and of keeping the spikes too long upon the plant. When one compares the number and size of the blossoms with the pseudo-bulbs, it is surprising how they can be produced, let alone maintained week after week as they are in too many cases. The best position for O. Forbesi is in an intermediate temperature, between that of the Cattleya house and the Odontoglossum house, or if such an one is not at command, the plants should be arranged close to the door or a ventilator in the former. They may be grown either in pots, baskets, or on rafts, the principal requirements being a free, open compost, and not too much of it, and good drainage. The usual peat and Moss mixture is suitable for it, and the latter should be induced to grow freely about the bases of the pseudo-bulbs in summer, the roots delighting in the abundant moisture at the time the pseudo-bulbs are finishing. The spikes appear soon after the growth is complete and come quickly to maturity. At the first signs of distress of the pseudo-bulbs, or, better still, before, all the flowers must be cut, and the plants must then be allowed a long rest in a cool, airy house. Very little water will be needed through the winter, and if the bulbs shrivel a little from this cause no harm will be done, though this must not be carried to excess. The plants should be repotted just as they begin to grow, this being usually needed about once in three years, provided they are surface-dressed when this is seen to be necessary. O. Forbesi is a variable species, the best form being that known as grandiflorum, a large flowering and brilliantly coloured variety. It is a native of Brazil, whence it was introduced in 1837. R.

Ferns.

STRONG-GROWING TRICHOMANES.

By their general appearance as also by their mode of growth and the delicacy of the texture of their foliage, Trichomanes closely resemble Hymenophyllums, from which they differ mainly in their mode of fructification. The genus comprises about 100 species, but many of these are of botanical interest only. In Trichomanes, as in Hymenophyllum, the fronds vary in shape and cutting, for while there are plants with fronds entire or slightly lobed, without a distinct central midrib and with veins radiating from the base in a fan-like manner, as in the New Zealand Kidney Fern (T. reniforme, here illustrated), others, such as the Killarney Fern (T. radicans, figured on p. 326), have their fronds more or less deeply cleft, though not truly pinnate, while in some other species again, and notably in T. trichoideum, the fronds are much-divided, slender, and flaccid, and their segments almost thread-like.

Trichomanes are found in tropical and temperate regions. The genus is represented in Europe by one solitary species (T. radicans), which is found wild in various parts of the United Kingdom. Only a few of the known species are devoid of creeping rhizomes, but whenever these organs are apparent, they differ from those of Hymenophyllums by their hairy nature and the great tendency which they have to cling to stone or any other substance of a hard nature in the close proximity of which they may be growing.

As regards light, moisture, and ventilation, the treatment which was recommended for Hymenophyllums (see The Garden, Sept. 21, p. 227) will be found equally suitable for the Trichomanes, but it may not be out of place to note here that whenever stone is used it is necessary that a little peat of a fibrous nature should be placed at its base to establish the plants. Trichomanes are usually propagated by division, although they may also be increased by seedlings, but that is a very slow and also very expensive process, as they require several years to produce plants of any size. The only instance of their having been propagated from spores with which I am acquainted is that of a batch of seedlings, several hundred in number, which in 1886 were raised at Messrs. Veitch's nurseries at Chelsea, when the species reproduced itself without any noticeable deviation whatever from the normal form. These seedlings were produced from spores sown in 1882, and after four years' care and attention were only little plants in 2½-inch pots. Still, the experiment was very interesting, inasmuch as it proved that with a certain amount of patience Trichomanes may, like most other Ferns, be propagated from spores, especially when these can be sown immediately they are gathered.



Trichomanes reniforme. From a photograph by Miss Willmott.

Some very interesting Trichomanes may be found among the small and medium-sized ones, but the most decorative are those which I would term the strong-growing kinds, the most distinct of which are as follows :—

T. alatum.—This species, native of Brazil and the West Indies, and known also in gardens as T. attenuatum, is one of the most distinct of all. It is very variable in dimensions and hairiness, though its more or less broadly spear-shaped fronds, borne on tufted stalks 2 inches to 4 inches long and winged above, usually measure 3 inches to 12 inches in length and 1 inch to 3 inches in breadth. They are two or three times cleft nearly to their midrib, and provided with pinnæ cut in the same way and lobes often again sharply toothed. Their delicately membranous texture and their very transparent pale green colour are shown to greatest advantage, and produce a most charming effect when the fronds are laden with condensed moisture. This species, which thrives best when established on a piece of Tree Fern stem, is hardly amenable to cold treatment, and prefers a temperature averaging from 45° to 50° in winter.

T. apiifolium is a beautiful species, native of the Philippine Islands and Polynesia, with fronds sometimes nearly 2 feet in length, including the dark, strong, hairy stalks. In general outline this plant somewhat resembles the better-known T. maximum, but it is of more graceful habit, and its fronds, which are produced from a closely-set crown, are much more finely divided and of a rich dark green colour.

T. auriculatum.—This is undoubtedly one of the most distinct Trichomanes in cultivation, as also one of the most beautiful on account of its peculiar climbing habit of growth and of the drooping character of its elegant fronds, which are almost stalkless, 6 inches to 12 inches long, 1½ inches to 2 inches broad, and twice divided nearly to the midrib. They are abundantly produced from strong, wide-creeping rhizomes and have the

stalk of their leafy portion slightly winged throughout or above only. Their pinnæ, of a peculiar shape and obliquely wedge-shaped at the base, are exquisitely transparent. This species has a remarkably extensive habitat, as it is found in Japan, Formosa, Northern Hindostan, the Philippine Islands, Java and Guiana, where, according to Backhouse, it climbs on rocks and also to the tops of the loftiest trees. Although it may be successfully grown under cool treatment, this species succeeds best in a temperature of 45° to 50° in winter.

T. EXSECTUM.—Although of a very slender character and of a pendulous or drooping habit, this lovely species, native of Juan Fernandez Island and Southern Chili, where it is said to be found hanging from the roofs of damp caverns, deserves to be classed among the strong-growing kinds, for its exceedingly elegant fronds often attain 15 inches in length. They are very abundantly produced from a wide-creeping, slender rhizome, and are extremely delicate and membranous in texture, resembling thin, flat, much-branched or finely-divided pale green Seaweed. Their segments are narrow, smooth, either simple or forked, and blunt at their extremity. This plant, which succeeds well under cool treatment, is equally at home on hard wood or on stone.

T. GIGANTEUM.—A strong growing species, native of Bourbon, Mauritius and the Fiji Islands, with fronds 18 inches to 24 inches long, including their stalks, and 6 inches to 9 inches broad. These are produced from a wide-creeping rhizome of a woolly nature, like that of the Killarney Fern, and finely cut, being four times divided almost to the rachis. Their segments, very narrow and distinctly flattened, are very transparent, notwithstanding their dark green colour and shining nature.

T. KAULFUSSI.—This very distinct species has broad, spear-shaped fronds 4 inches to 12 inches long and 1½ inches to 2 inches broad. They are produced from a strong wide-creeping rhizome of a woolly nature and are deeply cleft nearly to the broadly-winged rachis, the stalk of their leafy portion being densely and the surface of the segments slightly hairy. It is a native of the West Indies, Guiana and North Brazil, and requires stove temperature to grow freely.

T. MAXIMUM.—This species, which succeeds equally well on wood or on stone of a porous nature, is very handsome. Its erect, egg-shaped fronds, produced from a closely-set crown or very short rhizomes, each measure from 15 in. to 24 in. in length, including their stalks, and 6 inches to 9 inches in breadth. They are four times divided nearly to the midrib and their pinnules are very transparent. Although growing fairly well under cool treatment, this species, native of Java, Borneo and the Polynesian Islands, succeeds best in a temperature of 45° to 50° in winter.

T. MEIFOLIUM.—This is probably one of the most beautiful of all Filmy Ferns in cultivation. It is a native of Java, where, according to Backhouse, it occurs on the mountains at elevations varying between 4000 feet and 7000 feet. Its lovely plumes of tufted fronds, produced from a close-growing crown, are, when fully developed, quite 2 feet high. They are spear-shaped and very finely divided, being cut into narrow, almost thread-like segments, some of which, like those of the better-known Todea superba, stand forward and give the whole plant a very rich and soft appearance.

T. PINNATUM.—This species (also known in gardens as T. floribundum) is a native of Tropical America. It is as curious as it is beautiful, for its fronds, produced from an upright tufted rootstock, are conspicuously proliferous at their extremity. They are borne on strong, though flexible, naked or slightly hairy stalks, 3 inches to 12 inches long and of a wiry nature. Their leafy portion, only once-divided to the rachis, is from 6 inches to 18 inches long and sometimes 12 inches broad, being formed of very transparent pinnæ 2 inches to 6 inches long, nearly 1 inch broad, sharply and finely toothed on their edges. They terminate in a tail-like process, where they often produce a young plant which roots readily when touching the mossy ground or decaying vegetable matter, in which the plant thrives best in a temperature of 45° or 50°, or even higher in winter.

T. PRIEURI.—A magnificent species of erect and somewhat rigid habit, native of the West Indies, Peru and Brazil, and known also in gardens under the name of T. anceps. Its noble fronds, of a somewhat leathery texture, very dark green colour, and slightly hairy on their upper surface, are produced from an upright rootstock; they are 18 inches to 24 inches long with the stalks, 6 inches to 12 inches broad, and three or four times divided nearly to the midrib. Their lower pinnæ (4 inches to 6 inches long) are divided into pinnules, which are again deeply cleft into narrow, sharp-toothed segments. It succeeds best in a temperature of 45° to 50°, or even higher in winter.

T. RADICANS.—This is the only representative of the genus found in a wild state in Europe, and is known in England under the popular name of Killarney Fern, from its having been found at the Powerscourt waterfall and at the waterfall above Turk Cottage, Killarney, exposed to the spray on shady banks and rocks. It has also been reported from various places in the counties of Cork, Kerry, Waterford, Wicklow, &c. I cannot find any record of its existence in Scotland, but E. J. Lowe, in his excellent work "Our Native Ferns," vol. ii., p. 448, states that it has been found growing luxuriantly in some abundance in various places, extending over several miles in Wales, but that the localities have been kept secret on account of the dread of its extermination by collectors. In the third edition of Ray's "Synopsis," published in 1724, it is first mentioned as a British Fern by Dillenius, who gives an illustration of it, and describes it as a "dwarf creeping Fern, with transparent and shining leaves and winged stems," and states that it was found by Mr. Richardson at the head of Elm Crag Well, at Bellbank, near Bingley, Yorkshire, in which locality it was also found in 1758 by Bolton, who then remarked that it was plentiful in that district. But it is of a very cosmopolitan character, as it is also a native of Spain, Teneriffe, the Canary Isles, Madeira, Mexico, Brazil, &c. Beddome, in his "Ferns of British India," gives an illustration (t. 181) of the plant as found on the Khasia Hills; Eaton, in his "Ferns of North America," gives an illustration of it and states that it is found in Alabama; while Lowe, in his "Ferns British and Exotic" (vol. viii., p. 43), states that it was observed by Swartz, Bancroft and Purdie in the woods in Jamaica; Raddi, Forbes, Macrae, Scouler, Gardner, Sinclair and Vautier report it from various parts of Brazil, and Colonel Hall found it in the forest of Esmeraldas, El Ecuador; and Dr. Hochstetter and Mr. H. C. Watson found it in the Azores at an elevation of from 2000 feet to 3000 feet above the level of the sea. The fronds of T. radicans, including their stalks, vary from 6 inches to 18 inches in length and from 2 inches to 6 inches in breadth. They are produced from a wide creeping rhizome of a hairy nature, which has a particular liking to stone, to which it clings with great tenacity. They are three times deeply cleft to the rachis, which is narrowly winged, and their pinnæ are again deeply cleft into conspicuously toothed segments, their texture, though transparent, being particularly firm.

The following are among the most distinct of the large-growing numerous forms of this very variable species:—

T. R. ANDREWSI.—A variety originally found at Iveragh, Ireland, by Mr. W. Andrews, of Dublin. It is of normal dimensions and differs from the species in having narrower, more spear-shaped fronds, in their leaflets being more distant and distinct, and in the stalk being more elongated and less winged.

T. R. CAMBRICUM.—A Welsh variety, which differs from the species in the leafy portion of its handsome fronds being broadly triangular, and in their pinnules being much more numerous and quite wedge-shaped at the base.

T. R. DILATATUM.—A plumose form, differing from the type, as also from all other known varieties, by its large, massive, very dark green fronds, and by its pinnules, which are much less divided than in the species and broadly winged.

T. R. DISSECTUM.—As regards size and form of frond, this is somewhat similar to T. r. cambricum, but the pinnules are cut again into narrow segments, which sometimes are wedge-shaped at the base, when the plant is called cuneatum.

T. R. KUNZEANUM.—In this variety, native of Brazil, the fronds, of a somewhat leathery texture, are 12 inches to 18 inches long, besides the stalks, which are scarcely, if at all, winged; the pinnæ are distant, stalked and furnished with deeply cut pinnules, the lowest lobes of which are again cut into very long and narrow segments.

T. R. LUSCHNATIANUM.—A beautiful variety, also a native of Brazil, readily distinguished from all others through its narrower fronds, of nearly uniform breadth, being quite stalkless, the pinnæ reaching to near the rhizome, and the leafy portion tapering to a narrow point.

The last two varieties are not so hardy as the others, and succeed best in a temperature of 45° to 50° in winter.

T. RENIFORME.—As will be seen from the illustration, this species, usually known as the Kidney Fern of New Zealand, is a plant of very peculiar habit. Its singular fronds, produced from naked rhizomes of a particularly wiry nature, are kidney-shaped and entire, with a deep notch at the base, and borne on naked, wiry, round stalks 4 inches to 8 inches long. The leafy portion is 2 inches to 4 inches broad and very transparent, though somewhat thick, with veins radiating from the base in a fan-like manner, and, when fertile, the spore masses are arranged in a very regular manner all round the outer edge of the fronds and disposed at the end of nearly every vein. This species succeeds equally well either on a Tree Fern stem or with its slender rhizomes running into soft sandstone broken into small pieces and mixed with rough, fibrous peat.

T. SCANDENS.—A lovely species, native of Jamaica and Mexico, where it is found growing on trees. Its elegant fronds, 6 inches to 18 inches long, are produced from a wide-creeping rhizome of a wiry nature, and borne on strong, erect, naked stalks 2 inches to 4 inches long. They are cut quite to the stalk, which sometimes is slightly winged and hairy; their pinnules are divided into segments, that are again cleft about half-way down, with the margins finely hairy.

T. SUPERBUM.—This beautiful species, also known in gardens under the name of T. fimbriatum, is a native of Trinidad and British Guiana, and a very distinct plant. Its broadly egg-shaped, erect fronds, borne on strong stalks 2 inches to 5 inches long, and winged nearly down to the base, are produced from a strong, wide-creeping rhizome. Their leafy portion, 4 inches to 9 inches long and 2 inches to 4 inches broad, has its lower pinnæ divided more than half way to the stalk into oblong, toothed lobes. It delights in decaying vegetable matter and in a temperature of 45° to 50°, or higher in winter. S. G.

PROPAGATING FERNS.

At page 249 "H. P." mentions that I did not refer to Aspleniums in my note on sowing Fern spores. It was an accidental omission, though I intended referring to the genus with regard to other modes of propagation. I quite agree with what "H. P." says with regard to the uncertainty of spores germinating. This is generally the case with those most prolific in bearing bulbils, while in some destitute of them seedlings are easily obtained, though A. lucidum is an exception to this. I also agree with "H. P." with regard to spores collected in the autumn germinating in the spring, as I should regard

them as new spores. Although instances similar to those mentioned by "H. P." have come under my notice, I consider it misleading to quote isolated cases, especially as I have had so many disappointments when sowing spores which had been kept more than a year or two.

With reference to propagating Aspleniums, a great number of these produce bulbils on the fronds from which young plants are easily established. In some instances it may be necessary to peg down the fronds on suitable material for the young plants to make some roots before removing them, but generally the smallest bulbils may be established by treating them like spores when first sown. In some sorts fair-sized plants may be established on the old fronds without any pegging down, and these will give little trouble. For those taken off when quite small I like to surface the pots with peat, chopped Sphagnum, and sand in equal parts, passing it through a fine sieve before using. A number of other Ferns may be propagated in the same way as the Aspleniums, though few are so proliferous. The beautiful Gymnogramma schizophylla gloriosa is a remarkable example, being, as far as I am aware, the only one of the genus. One young plant from the extremity of each frond is generally obtained, though sometimes the side pinnæ also bear them. To establish young plants, the fronds may be pegged on some cocoa-nut fibre refuse, into which they will soon root. I find this variety varies considerably when raised from spores.

The Woodwardias afford further examples. In W. radicans one rather large bulbil is formed on the midrib towards the end of the frond, and in W. orientalis the whole upper surface of matured fronds is covered with tiny bulbils, each of which has one small frondlet standing erect. This gives the plants a very attractive appearance, especially where they are well exposed to the light, as they then have a rosy pink shade. The slightest touch will remove them, and if treated carefully, hundreds of plants may be obtained from one frond.

Among Adiantums we have some remarkable examples, as A. ciliatum, better known perhaps as A. Edgworthi. In a humid atmosphere the young plants at the extremities of the fronds will continue to grow until they in their turn form others, thus giving three or sometimes four generations all attached. The nearly allied species caudatum is somewhat similar, but I have never seen this bear more than one young plant at the extremity of each frond. A. dolabriforme is another interesting example, and quite as proliferous as A. ciliatum, while A. lunulatum, the deciduous species, should be included. This has larger fronds, but through losing its fronds in winter is often lost altogether. These may be treated the same as the Gymnogramma referred to above. Aspidium cicutarium is a remarkably distinct example; the round bulbils, which are very abundant, drop off, and wherever they find genial conditions they soon make plants. There is little difficulty in propagating Hemionitis palmata, as young ones are produced on the basal fronds and take root in the same pot. H. cordata is also easily managed, and may also be readily obtained from spores. Goniopteris prolifera is another example, producing two or three bulbils towards the extremities of the fronds, and these will attain to a fair size on the parent fronds. In all instances where the fronds are not on the surface where the bulbils can take root, it is advisable to remove them from the fronds as early as possible, as this will save the first young roots which appear as soon as the second fronds start. In all cases care should be taken that bulbils or young plants do not suffer through being allowed to get dry after they are taken off. Damping is much more likely to set in when the tiny fronds get withered. A close atmosphere and shading are necessary, but air should be given early in the morning for a short time to sweeten the atmosphere. This is often neglected both in the Fern and other propagating houses, and I know nothing so important as avoiding a stagnant atmosphere.

A. Hemsley.

Trees and Shrubs.

DEUTZIA LEMOINEI.

Deutzia Lemoinei, which first made its appearance at a meeting of the Société Nationale d'Horticulture de France, April 12, 1894, and the



Deutzia Lemoinei. Engraved for The Garden *from a photograph sent by Mons. V. Lemoine, Nancy.*

exhibition of which was the subject of a laudatory notice in the Bulletin of that society, is a hybrid between D. gracilis and D. parviflora. On the occasion referred to the society pronounced this new variety worthy of its highest awards, viz., a first-class prize and a first-class certificate of merit.

Deutzia gracilis (Zucc.), which grows in moist valleys in the mountainous regions of Japan, is a small tufty shrub with lanceolate leaves and white flowers, produced in separate or detached clusters, and having glabrous anthers borne on the middle point of three-lobed filaments. This species, which was introduced by Siebold about the middle of the present century and put into commerce by M. J. Baumann, nurseryman, of Ghent, is now grown almost everywhere. It is raised in large quantities for forcing, and we are informed in the *Nouveau Jardinier* that "it is the finest of all shrubs for that purpose." It is hardy, and delights in a light, cool, moist soil, of which heath soil forms a large proportion.

Deutzia parviflora (Bunge) is a recently-introduced shrub, a native of the northern parts of China and the region of the river Amoor, whence it was introduced into the Imperial Botanic Garden at St. Petersburg, and was afterwards sent to the Arnold Arboretum at Cambridge, in the United States of America. Professor Sargent, the learned director of the last-named establishment, sent us a few branches of it, one of which produced a shoot which took root and grew, and thus it came to pass that I was the first in Europe to put this fine species into commerce. About the same time two or three plants of it, raised from seed sent by Professor Sargent in 1887 came into bloom in the gardens of the Muséum, at Paris. This plant forms an erect tuft, seldom exceeding 5 feet in height, with rather stout rigid stems, vertical in growth, and elliptical or lanceolate leaves of a deep green colour, toothed, and strongly veined and wrinkled on both sides. The stems of the previous year's growth bear throughout their entire length small corymbs of flowers, which are exactly similar in form to those of the Hawthorn. The flowers are fully opened out, and the petals, which are creamy-white and roundish in shape, are contracted at the base into a very narrow claw, thus exposing the calyx to view, as occurs in the flowers of many rosaceous plants. The stamens are of a light yellow colour, and the filaments are simply widened at the base, but not auricled at the apex. This is the earliest flowering species of the whole genus, as it comes into bloom in April some days earlier than D. gracilis. It is also well adapted for forcing, and is perfectly hardy in the climate of Nancy, where the varieties of D. crenata are often cut down to the ground by frost. Fertilised with pollen of D. gracilis in the spring of 1891, seed of D. parviflora produced a number of hybrid plants which, planted out in the open ground in the second year of their growth, have borne uninjured the frosts of the last three winters. These plants form tufts averaging about 32 inches in height, the branches of which, all erect, are furnished in the early days of May with panicles of flowers, and at that time one may count on each plant from 1000 to 1500 flowers or flower-buds. In its general appearance

Deutzia Lemoinei is intermediate between its two parents, of which it only inherits the qualities. Its branches are straighter, firmer, and more solid than those of the male parent (D. gracilis), and more regular in appearance, shorter, and more numerous than those of the female parent (D. parviflora). The flower-clusters, growing from all the axils on the branches, make their appearance at an early date, and are produced with such regularity that no vacant spaces can be observed, while it is not unusual to see parts of the long stems of D. parviflora here and there devoid of flowers in a random sort of way. The inflorescence of Deutzia Lemoinei resembles neither the corymb of D. parviflora nor the elongated cluster of D. gracilis, but takes the form of an erect branching panicle, which is sometimes hemispherical in shape and sometimes like a broad-based cone. Each panicle bears from fifteen to twenty-five large, well-opened flowers, which are each about an inch in diameter, and present an appearance quite novel amongst the Deutzias. The petals are broad, oval, undulated at the margin, of a pure white colour, and entirely cover and conceal the lobes of the calyx. The stamens are of a reddish-yellow colour and the filaments are three-lobed. The flowers of Deutzia Lemoinei are fully opened out, while the pointed-petalled flowers of D. gracilis are generally not well opened out. The flowers of D. Lemoinei also stand so closely together as to completely hide the peduncles and pedicels from view, differing in this respect from the flowers of both D. parviflora and D. gracilis. Deutzia Lemoinei is a first-class shrub for forcing, as was evident from the few specimens exhibited in April, 1894, at the meeting of the Société d'Horticulture de France. These specimens had been taken up and potted in the autumn preceding and then grown on in a cool house. Had they been placed in a temperate house, they would have come into flower much earlier. The plants grown in the manner de-

scribed are well shaped, regular in form, laden with pure white flowers, and not encumbered with superfluous foliage. Grown side by side with plants of D. gracilis they quite eclipse the latter by their beauty, so that I think I am warranted in venturing to predict that this new variety will ere long be largely grown for forcing, and that it will eventually supersede D. gracilis for this purpose. When grown in the open air D. Lemoinei requires no special attention, and consequently may be successfully cultivated in any garden, even the smallest. Quite as free-flowering as D. gracilis, it surpasses the latter in hardiness and vigour, grows much faster, and thrives in any kind of soil. Emile Lemoine.

Hibiscus syriacus Jeanne d'Arc.—Despite the great number of varieties of this autumn-flowering shrub that we have in our gardens, the only white variety that I have known for any length of time is H. totus albus, whose blossoms, though pure white, are single. There is a double form known as H. albus-plenus, but though the major portion of the petals is white, yet they are marked with red at the base, and in this way they form a reddish centre to the flower. Jeanne d'Arc is quite a pure white double flower, and forms a pleasing variety to those already in cultivation. The new-comer is, like nearly all the others, of Continental origin, and is said to be a pure white sport from the parti-coloured variety Duchesse de Brabant, a very pretty kind.—T.

Ampelopsis muralis.—This form of Ampelopsis does not seem to be generally known, yet it has appeared in some of the Continental catalogues for years. It is not to be found in the Kew hand list, in which a considerable number of Vines and Ampelopsis is given. The Ampelopsis in question is apparently a variety of the Virginian Creeper (A. hederacea or quinquefolia), but it differs in a marked manner from the ordinary form, as it will cling to a wall or any other support almost as tenaciously as the ever-popular A. Veitchi, while it grows as freely as the common Virginian Creeper. Hence it is especially valuable where it is desired to quickly clothe a wall with foliage, as no nailing or securing is required, but the shoots attach themselves by the flattened points of their tendrils exactly as in A. Veitchi. The foliage as a rule dies off brightly coloured, but this year, despite the fine weather we have had, the colouring of the Virginian Creeper does not appear to be so uniformly bright as it generally is.—T.

Sambucus racemosa.—If this, the Scarlet-berried Elder, could be induced to fruit as freely as the common kind, it would doubtless be planted much more frequently than it is, for to many people it is quite unknown, though when laden with fruit it is very ornamental. From a foliage point of view, too, it deserves recognition, not so much the typical kind as some of the cut-leaved forms. Loudon mentions one cut-leaved variety, laciniata, but there are now some three or four differing more or less from each other. The variety most generally met with is serratifolia, which forms a very graceful specimen. In the spring of the present year a charming form was awarded a first-class certificate by the Royal Horticultural Society under the name of Sambucus racemosa plumosa aurea. The leaves of this are of a very pleasing shade of pale yellow, and no doubt by exposure to the full rays of the sun they would acquire a rich golden hue, as in the case of its relative, the golden form of the common Elder.—T.

Ampelopsis Veitchi.—There is evidently considerable deviation from the type in the forms of this handsome creeper. In my own garden three variations occur, which, as two of the plants occupy between them a side of the house and the third covers an adjoining wall, can be readily compared during growth. They were all procured from the same nursery and were planted at one time. No. 1 is the form that we are accustomed to consider the type—close-growing, with moderately small and smooth leaves. No. 2 has leaves that are slightly larger, stand out further from the wall, and which have surfaces more or less rough and corrugated. This variety is a slower grower than the other two, and its leafage turns colour and falls a full week earlier. The third is the most striking in effect, producing very large leaves, one of which I have just picked for the purpose of measurement. I find that the extreme breadth is 12⅝ inches, the length, from the setting on of the stalk to the point, 7⅝ inches, and the stalk itself 10½ inches. I have never previously measured a leaf of A. Veitchi, but do not remember to have seen a larger.—S. W. F., *Torquay.*

Eucalyptus citriodora.—"T.'s" note on this induces me to give my experience with it. Of over twenty species of the Gum trees which I have grown this is the most difficult to keep. Several times I have raised it, but it never survives the third winter, and another grower, a professional in this neighbourhood, finds the same miffiness with it. I rather think it needs a warmer winter temperature than the others, and at the same time plenty of fresh air. I do not know its native country; it may be from the warmer parts of Australia.—J. M., *Charmouth, Dorset.*

Wistaria sinensis.—An old specimen of this climber, which covers a wall of about 20 yards in length and the circumference of whose stem is over 1 foot 8 inches, has this year made vigorous growth, having sent out several long suckers, the longest measuring over 30 feet. The ends of three of the shoots are fasciated, one being 1½ inches in breadth at its extremity. For a long time this Wistaria made scarcely any growth, but it has flowered abundantly every year.—S. W. F., *Torquay.*

A large Magnolia tree.—A fine specimen of Magnolia grandiflora (the Exmouth variety) is growing here in a sheltered valley. The tree is a standard, and is situated in a gravelled yard with buildings on two sides of it. Its present measurements are as follow: Circumference of trunk at ground, 4 feet 7 inches; widest spread of branches, measured in a straight line, 34 feet 6 inches; measurement of spread at right angles to foregoing line, 26 feet; height, 20 feet. This height was exceeded by about 10 feet previous to the blizzard of March 9, 1891, when the upper branches were broken off. Two subsidiary stems, presumably suckers, about 18 inches in circumference, rise on each side of the main trunk. The tree is in the best of health and is making good growth, so much so that the damage done by the blizzard is not now apparent. The severe weather of last winter caused many of its leaves, as well as all of the buds then formed, to drop when the sap commenced to move in the spring, but otherwise the tree is uninjured, and is now bearing a late and rather scanty crop of flowers. During last year it bloomed profusely, bearing considerably over 300 blossoms, the first opening in June, while the last was cut and brought into the house in November. The greatest number of flowers open at one time was twenty-nine. The branches on one side of the tree come to within a foot of the ground. I find it impossible to discover the age of this tree, but I am told by a resident seventy years of age that it was a big tree when he was a little boy.—S. W. F., *Torquay.*

The bird nuisance.—I never remember the birds being more troublesome and destructive than they have been this season. Fully two-thirds of our Pears, where unprotected with nets, have been destroyed by them. The tomtits seem to be the worst aggressors, and I shall be very grateful for any hint as to the best means for destroying those little pests. No doubt some will tell me I shall be destroying my best friends. I know of nothing more exasperating than to see so many of the best fruits destroyed. I would not grudge the birds a fair share if they would only finish what they begin before attacking others, but they slightly peck the stem end just enough to set the fruit rotting, and are off to another. Apples, too, have been badly attacked by the tits, the finest Blenheims or Peasgood's Nonsuch having a great attraction for them. These tits are far more destructive than bullfinches; I have never known the latter to attack fruit.—Wm. Sangwin, *Trelissick, Truro.*

Chrysanthemums.

OVER-STAKED CHRYSANTHEMUMS.

Private gardeners as a rule use far too many stakes for their bush Chrysanthemums. In some instances little else but sticks are to be seen till near the time of flowering, and even when the earlier growths are strong and branching yet much more staking is done than is absolutely necessary. When it is the grower's aim to produce large, globular-shaped, yet not exactly formally trained or exhibition plants, the summer stopping is frequent and the mass of shoots resulting is spindly, not being equal to producing more than weak terminal heads of flowers, disbudding not greatly improving matters. Such growths may require to each have a stake, but since the days when I spent hour after hour perched on a flower-pot staking Chrysanthemums, my aim has been to break away from the unnatural method of growing and training these serviceable late autumn and winter-flowering plants. That they can be made to produce far more flowers with the aid of a very few stakes I have repeatedly proved, and this season I have been more than ordinarily successful in this direction. Private growers will do well to "take a leaf" out of a market grower's book, or, in other words, to adopt his practices as far as growing decorative Chrysanthemum plants is concerned. It will be found that the more naturally grown the plants are and the fewer stakes there are used about them the more flowers there will be on the plants and the more effectively the plants can be grouped. Nor are these the only advantages. Now-a-days abundance of cut bloom is wanted in most establishments. From the unstaked or only lightly staked plants it is possible to cut quantities of flowers, and yet not greatly disfigure them, but if we cut a few heads of bloom from the much-staked plants, they are practically spoilt for conservatory decoration. Compare the much-stopped, closely-staked plants with those grown in the open borders and you then have an object-lesson, the value of which there ought to be no mistaking. The border plants have been allowed to grow, branch and flower naturally, and, should the present favourable weather continue a few days longer, there will soon be a grand display in the open air.

Those of my readers who have started plants with a view to growing a few blooms for exhibition, and then allowed some of these clear-stemmed plants to branch and flower naturally will probably admit that they have been agreeably surprised at the results. Such great branching heads are effective in large conservatories and afford a profitable supply of cut blooms, but they are not what market growers prefer and not always the best for private places. That, however, is no excuse for going to the other extreme, pinching and stopping unduly with a view to having the plants extra dwarf. Instead of stopping the cuttings in the cutting pots, pans, or boxes, wait till they have been in 2½-inch pots long enough to become established and then lightly stop them. In this way four or more shoots will be had, and it is these that should lay the foundation of the future plants, and very different to those resulting from a quantity of soft sucker growths ob-

tained by much closer stopping. In looking through my stock of plants I find no failures under this method of treatment; in fact, more free-flowering Chrysanthemums could not well be had. W. H. Lincoln, which is perhaps the most profitable yellow variety in cultivation, succeeds particularly well when not frequently stopped. My plants were lightly stopped when about 6 inches high, and from each three or four strong breaks resulted. These were stopped when from 10 in. to 12 in. long and afterwards allowed to break naturally. On an average there are a dozen growths springing from each of these main branches, and the precaution having been taken to remove early formed buds, I shall have abundance of fine single blooms (all are disbudded) during December, with stems that may be cut to a length of 12 inches to 15 inches. Three, or at the most four, light Bamboo stakes are placed to each plant, and these are ample for the purpose of preventing breakdowns. This variety is given 10-inch pots. Edwin Molyneux is another popular and serviceable variety, and I grow it extensively. In this instance the cuttings were nearer 9 inches in length when stopped, and the three or four resulting stem-growths broke naturally, a crown-bud forming at the point of each when about 2 feet long. There was no necessity to remove these buds, and the plants are now furnished with from twenty-four to thirty growths, each 15 inches long and surmounted by a good bud. This variety suceeeds best in 9-inch pots and requires four stakes to keep the growths up together. Particularly useful plants can be had of Fair Maid of Guernsey, which, if allowed to divide and sub-divide naturally, may be had at their best late in December. Mine are in 10-inch and 11-inch pots, and range from 4 feet to 5 feet in height, yet three or four stakes are sufficient to support four dozen flower stems. Florence Piercy is even more free-flowering if allowed to branch naturally. Treated similarly to Fair Maid the plants are 4 feet high and will carry not less than three dozen disbudded blooms. In Mlle. Lacroix we have another free-branching variety that requires little or no staking, always provided frequent stopping is not resorted to. L. Canning, the market grower's favourite mid-winter variety, though by no means of a robust habit of growth, yet requires only three or four stakes and two strips of raffia to keep the growths from sprawling about. Plants in 10-inch pots are not more than 2 feet high, and will give two dozen good late blooms. I had nearly forgotten my old favourite Lady Selborne, yet this is one of the very best for growing in the more natural manner. Cuttings should be struck early in the winter, stopped when 6 inches high, and again when the shoots following are 6 inches long, afterwards allowing them to extend and branch naturally, disbudding freely, in order to have medium-sized blooms with stems not less than 12 inches long. My plants in 10-inch pots are 5 feet high and furnished with from three dozen to four dozen blooms, with abundance of spray to follow from the hard lower portion of flowering growths.

Many of the newer varieties promise to succeed well under this method of culture. Florence Davis in 9-inch pots and only lightly stopped is well furnished with long, if somewhat spindly, flowering growths, yet three stakes are sufficient to support the lot. Beauty of Exmouth is somewhat stouter and scarcely so free-flowering. In this instance some of the plants were stopped when 12 inches high, and not again afterwards. Thomas Hewitt, Viviand Morel, Bruce Findlay, T. Wilkins, a beautiful yellow variety, Duke of York, and a few others have been similarly treated with excellent results, each carrying from a dozen to fifteen strong buds with long stems. Princess Victoria, a very promising late variety if only lightly stopped, forms a few long, soft, yet very free-flowering growths. If not disbudded, each growth would be furnished with a terminal head and side flowers to a length of 12 inches. J. S. Dibbins is sturdier and requires few or no stakes. W. Iggulden.

Chrysanthemums from Japan. — Messrs. Cannell and Sons, of Swanley, have this autumn started somewhat of an innovation by distributing under the native names some new Chrysanthemums they have imported from Japan. They are Kumo-no-ue, or White Good Gracious, Usugesho, a Japanese incurved lilac-pink, with reverse of silvery pink; and Shink-a-garibi, of a golden bronze and terra-cotta colour. Messrs. Cannell's new departure may well be recommended to all importers of this popular favourite, but especially those on the other side of the Atlantic. By far too much confusion has been caused on account of these native names being suppressed and English or American ones bestowed in their place.—Chrysanth.

A French Chrysanthemum committee.—The editor of the *Revue Horticole*, of Paris, in a recent issue devotes some space to the support of Mr. H. Fatzer's suggestion that the National Horticultural Society of France should form a committee to look after the interests of the Chrysanthemum, which is essentially a French flower. After quoting an article in an English contemporary, the *Revue* mentions the existence of the N.C.S. here, the American Chrysanthemum Society and the Société Nationale des Chrysanthémophiles of Brussels, and adds that it is difficult to understand why France—which has given rise to most of the varieties cultivated at the present time, and which takes so keen an interest in the flower—should remain in the rear of other nations in this respect. An outline of the lines upon which the proposed committee should work is then given, which will certainly meet with the approval of Chrysanthemum growers here. Let us hope that early in the season a meeting of the leading French Chrysanthemum specialists will be held to discuss the proposal.—C. H. P.

October Chrysanthemums.—These seem to be becoming more numerous every year, and as they are chiefly of the large-flowering section, it was an excellent idea of the N.C.S. to hold an October show, by which means many varieties are brought before the public notice which would otherwise perhaps be too late for the ordinary shows in November. I notice the next meeting of the floral committee will be on the 8th prox., the corresponding meeting last year being on the 10th. On that occasion eighteen new varieties of merit were staged, the principal being Frank Wells, Souvenir de Petite Amie, President Armand, Th. Denis, Exmouth Yellow, Petit Délaux, Préfet Robert, Mrs. E. G. Hill, Mme. C. Molin, Commandant Blusset, Mrs. W. H. Lees and Duchess of York. Some of these were certificated, and it will be interesting to see, on the occasion of the next Aquarium show, whether they maintain their reputations and justify the awards that the committee made last year. Among other varieties shown in good form last year at this meeting were Mlle. Thérèse Rey, President Borel, Mrs. C. Harman-Payne, Eda Prass, Louise, W. Tricker, Mme. E. Rey, William Seward, Comte de Germiny, W. H. Lincoln and Van den Heede.—Chrysanth.

Pompon Chrysanthemums.—Nothing but large flowers seem to be appreciated by the public at the present time; hence when a prize is offered at any of the exhibitions for pompon Chrysanthemums it is in nearly every case bestowed upon those flowers in the cultivation of which disbudding has been carried out most rigidly; in fact to such an extent, that in many cases they bear no resemblance to the pompon varieties of old, consisting, as the exhibit does, of three blooms of one variety, each flower being expanded to the utmost extent and not a trace of a bud to be seen. There is to my mind an immeasurably greater amount of pleasure in seeing a few clusters of flowers, some fully and others only partially expanded, with their attendant buds than there is in very formal flowers each supported on a piece of clear stem. —T.

NEW EARLY CHRYSANTHEMUMS OF 1895.

For some few years past the admirers of early Chrysanthemums have indulged in the hope that a rapid advance, almost perhaps corresponding to that which has taken place in the later section, was at hand. Their improvement and extension seem, however, to have been somewhat limited when the large number of new varieties that have been recently sent out is taken into account, as the display of early Chrysanthemums at the September shows at the Aquarium hardly justifies the hopes that have been entertained. With a few exceptions here and there, very few of the novelties are staged at those shows, most of the exhibitors apparently preferring to rely upon old-established sorts such as the Desgrange family, Comtesse Foucher de Careil, Lady Fitzwygram, and a few others in the large-flowering group, together with an abundance of the early pompons that have been much longer in cultivation.

At the recent show a few novelties were seen, the best of them being Mme. Carmiaux, a white flowered kind; Notaire Groz, a mauve-coloured variety, with a tinge of rose; and Harvest Home, yellow and orange-bronze. It may be that those who admire early varieties the most do not belong to the class of exhibitors, but prefer to keep the new acquisitions at home in the open border to adorn their gardens; but it seems most probable that if new earlies as a class were really of any great value, some members of the trade would take this opportunity of making their merits known. When we consider the intensity of colour to be found in Dahlias, Gladioli, Asters, Zinnias, &c., we cannot fail to be struck with the fact that early Chrysanthemums, excepting the whites and yellows, are wanting in purity of tones which would make them of value. The bronzes, mauves and reds are, in the light of a fine September day, dull and unattractive, and it must ever be the aim of raisers of this race to impart to their favourites something of the brilliancy of colour which characterises the later race. When this is achieved and greater size than is found in most of the new kinds is obtained, public estimation will no doubt be bestowed upon early Chrysanthemums to a greater extent than at present.

As show flowers they cannot be said to hold a very high place. Useful in groups and in funeral wreaths, the white varieties will long be sought after by florists, but the somewhat magniloquent descriptions of the raisers have led us to expect much more than this. We have been told that the new earlies of the past few years are to compete in all respects with the popular November race, a promise that as yet is a long way from realisation.

The following is a list of the novelties announced for the present year. They are all in the hands of the English trade, and we may well hope to see them next autumn in something like presentable form:—

Alfred Droz (Délaux).—Japanese; golden yellow, covered with red, fine petals.

Ambroise Thomas (Délaux).—Japanese; long petals, crimson-red, lightened gold, tipped bright gold, golden centre, dwarf.

Bouquet de Feu (Crozy).—Fiery brick-red, dwarf and free.

Chanteur Ninon (Crozy).—Purple-red, reverse bronze.

Colibri (Crozy).—Purple-chestnut-red, reverse coppery ochre, dwarf.

De la Guille (Crozy).—Long petals, dark chrome-yellow.

Eclaireur (Bouchariat).—Bright purple and lilac at base, broad petals.

Emily Grunerwald (Délaux). — Canary yellow, centre and tips violet-red.

Erectum Album (Crozy).—Broad flat petals, snow-white.

Etienne Devillat (Crozy).—Coppery red, reverse dark buff.

François Vuillermet (Délaux).—Japanese; broad petals, rosy violet, silvery centre.

Gladiateur (Boucharlat).—Japanese; broad petals, rose-violet, reverse silver.

Grunerwald (Crozy).—Purple-red; colour and form of Cullingfordi.

Jean Vuillermet (Délaux).—Japanese; dark brown-crimson, centre and reverse old gold.

Jeanne Thérèse (Délaux). — Incurved Japanese; broad petals, silvery white, shaded rose, centre golden.

Luteum (Boucharlat) —Japanese; canary yellow.

Mme. Albert Menier (Délaux).—Japanese; broad white petals, centre dark cream.

Mme. Armand Groz (Délaux). — Japanese; fine petals, rose nankeen, shaded white, centre red and old gold.

Mme. Biessy (Crozy).—White, passing to soft rose.

Mme. Charreton (Crozy).—Long petals, soft satin rose.

Mme. Casimir Perier (Délaux).—Japanese; milk-white, shaded cream, centre yellow, surrounded with dark violet-rose,

Mme. Deléante (Délaux) —Japanese; bright yellow, drooping petals.

Mme. Emile Nonin (Délaux).—Long drooping petals, milky white, centre darker.

Mme. Gojac (Délaux).—Broad petals, violet-rose, glazed silver.

Mme. Léon Carnet (Délaux).—Japanese; broad petals, white, shaded rose, centre greenish yellow, dwarf.

Mme. Schapfer (Crozy).—Long drooping petals, straw-yellow, centre canary.

Marie Cavalier-Cointet (Crozy).—Broad goffered petals, white, passing to rose.

Massifaire (Crozy).—Light mauve-rose.

Michel Coulouvrat (Crozy).—Broad petals, purple-red.

Mignonne (Boucharlat).—White ground, edged bright purple, broad petals.

M. Bockmann (Délaux).—Long drooping petals, salmon-red, lightened gold, centre golden yellow, reverse silvery.

M. Coulin (Délaux).—Long petals, bright old gold, edged and shaded coppery red.

M. Displand (Délaux).—Broad incurved petals, canary-yellow, shaded coppery red.

M. Georges Menier (Délaux). — Japanese; long petals, violet-amaranth, reverse silvery.

M. Lévêque fils (Délaux).—Bright golden yellow, tipped dark crimson-red.

M. Lévêque père (Délaux).—Broad petals, red, lightened salmon, dwarf.

M. Regnault de Molmain (Délaux).—Japanese; broad drooping petals, colour creamy white, shaded rose, centre darker.

Notaire Groz (Délaux).—Long drooping petals, mauve-rose on a silvery white ground, delicate colour.

P. Crozy (Crozy).—Broad petals, slightly incurved, purple-red.

Pépinièriste Léon Carnet (Délaux).—Rose, shaded white, centre golden yellow, passing to cream, broad petals, dwarf.

Perle des Massifs (Crozy).—Moss-rose, very free.

Préfet Cassagneau (Délaux).—Long drooping petals, fiery crimson.

Président Michelli (Crozy).—Long petals, yellow, shaded carmine-red, reverse ochre.

Sirène (Boucharlat).—Broad petals, rosy pink.

Souvenir de Charlotte Baille (Délaux).—Japanese; cream, shaded violet-rose.

Souvenir de M. Auguste Nonin (Délaux).—Japanese; golden red, tipped yellow.

Surpasse Gustave Grunerwald (Délaux).—Broad petals, silvery white, flamed violet-rose.

Triomphe de Lyon (Boucharlat).—Incurved; broad petals, dark rose, shaded purple, tipped gold, passing to canary, reverse sulphur-rose.

C. Harman-Payne.

Chrysanthemum Colonel Chase.—Unlike very many of the newer varieties of Chrysanthemums which are sent out with a great flourish of trumpets, the variety under notice is a notable exception. It is a refined and magnificent flower without the least sign of coarseness. In colour it is a kind of creamy blush with a pinkish shade over the whole, the petals drooping gracefully. It is also a good grower, my plants ranging about 5 feet in height and carrying their foliage well.—A. Young.

Chrysanthemum Ryecroft Glory is well maintaining its reputation as the best of out-of-door yellow-flowered Chrysanthemums. With me it grows 4 feet high on a west border. The colour, golden yellow, is much appreciated at this time of year, as it contrasts so well with the various autumn-tinted foliage so much in use for filling vases.—E. M.

—— This is a brilliant and attractive variety, and most useful for cutting or conservatory decoration. Its value is enhanced from the fact that it comes into flower after the autumn varieties, such as Mme. Desgrange and Miss Cullingford, and before the ordinary November sorts open, this being a rather scarce time for flowers generally. In seasons like the present it is a good plan to place Ryecroft Glory behind a north wall, that is if the flowers are not wanted till the first or second week in November. This is an important time with me, and I should be glad if some reader would name a good free-flowering graceful white Japanese variety to come in with Ryecroft Glory. I used to grow James Salter, which produced enormous quantities of bloom early in November, but my employers objected to the colour, so I discarded it. I may mention that I do not disbud to any extent, small flowers and plenty of them being preferred to large blooms.—J. C.

Chrysanthemums damping.—I enclose some flowers and leaves from my Chrysanthemums, and would be obliged if you would let me know through The Garden what you think is the cause of their damping. They are in a good airy house free from drip, and a little fire-heat is turned on in damp weather. The leaves look as if they were attacked by some fungoid growth; probably it may be the disease that Golden Wedding was attacked with last year, only in an aggravated form. The plants have not to my knowledge had an excess of liquid manure.—W. J. M.

*** Your Chrysanthemum plants are not attacked with the fungoid disease so general last year in the case of Golden Wedding, nor can the present condition of your greenhouse cause them to do so badly. Too much liquid manure is certainly the cause of similar decay seen in more than one instance lately. The soil becomes soddened and sour by over-strong doses of stimulants, which the leaves cannot assimilate. Clogging the soil by watering too frequently towards the end of the growing season, when the leaves have ripened, will also lead to such decay as is seen in the specimens sent. It is advisable to sweeten the earth and roots by allowing the same to become dry, almost to the point of causing the foliage to flag, subsequently applying moisture only when you are certain, by careful examination of the soil, that the roots require it.—Ed.

SHORT NOTES.—CHRYSANTHEMUMS.

Chrysanthemum Noces d'Or belongs to the Japanese incurved section. The petals are narrow, forming a full solid bloom when fully expanded. The colour is a rich golden yellow on the upper surface, the reverse paler.—E.

—— This is a Japanese incurved, with grooved florets of medium width. The blooms are of good size and very full, and the colour is a rich golden yellow. It was raised by Ernest Calvat and sent out in the spring of last year. It is somewhat early, and has already been shown this season in very good form.

Chrysanthemum Emily Spilsbury is stated to be a cross between Condor and Miss Anna Hartshorn, the former a French and the latter an American variety. The blooms are large, the florets long, grooved, and slightly intermingled. The blooms are rather spreading than globular, and the colour is a distinct shade of dead white.

Chrysanthemum President Armand.—A novelty sent out last year, and, like many from the same source, a Japanese incurved. It is capable of great development, and when well grown is a big, massive-looking show flower. The florets are of great length, curling inwards and pointed at the tips; they are also deeply grooved. The inside colour is carmine-chestnut and the reverse a distinct shade of brassy yellow.

Chrysanthemum A. H. Fewkes is another American incurved Japanese, but of a less massive type than Philadelphia. The blooms are not so globular and the florets are much narrower and pointed at the tips. The colour is a very pure shade of deep golden yellow. It comes early into flower, and has been commended by the floral committee of the N.C.S.

Chrysanthemum Boule d'Or. — One of Ernest Calvat's best productions and quite new this autumn, although the name is an unfortunate selection on account of another well-known exhibition flower being so called. The florets are very broad and deeply grooved, somewhat pointed at the tips, and forming a remarkably massive bloom. Those who know Louise will appreciate its merits when I describe Boule d'Or as a golden amber counterpart of Louise. —C. P.

New white Japanese Chrysanthemums. —Although somewhat early in the season, there have been several good additions to this class. Lady Esther Smith, raised by Mr. R. Owen, has already been described in these columns. Mme. Ad. Chatin is of the Japanese incurved type, good and solid, colour very pure. M. Montigny is a Japanese, with long toothed florets. Miss Alice Lowe has long curly florets of medium width, and Mrs. R. Jones, quite new, has very long tubular florets, and is a big flower. Mutual Friend is of American origin. Several very first-class white Chrysanthemums were seen last season from the same source, notably Niveum, The Queen, and W. G. Newitt.

September and October Chrysanthemums —Large numbers of these are of French origin, quite confirming the opinion expressed last season that the American varieties are later in coming into flower in this country than the French. Most of the new flowers that were open by the first week in October were seedlings of M. Ernest Calvat, although Messrs. Lacroix and Délaux were represented to a small extent. Some good blooms, however, of American varieties were staged at the October show, such as Eda Prass, Mrs. E. G. Hill, Wm. Tricker, Julius Roehrs, W. G. Newitt, and one or two more.—Chrysanth.

Garden Flora.

PLATE 1037.

NYMPHÆA MARLIACEA IGNEA.

(WITH A COLOURED PLATE.*)

The story of the beautiful Water Lilies raised by M. Latour-Marliac has been told so fully and recently in The Garden, that there is no need to go over the ground again, but other kinds have been raised, and the past year has been one of great beauty among Water Lilies. In my own Lily pond they were very beautiful for nearly five months, and people who have under other conditions all the kinds that I have were surprised to find how much better some of them did in the open water than in fountain basins and tanks. Whether owing to the greater mass of mud at the bottom of the pond or to perfect freedom to ramble where they liked, or to some other cause, I do not know, but they were a sight to see. Among them bloomed the beautiful Water Lily which is here figured—not a very large kind, but of rich and lovely colour, which can be but feebly shown in colour-printing. The plant was not strong enough to give us many blooms, but when stronger it will be very effective. The effect of the red Water Lilies is quite distinct from that of the large white, primrose and flesh-coloured kinds; they seem to come from a different species, flower freely,

* Drawn for The Garden by H. G. Moon in the open water at Gravetye Manor, Sussex. Lithographed and printed by Guillaume Severeyns.



and have a distinct growth. The effect of the colour is better the closer they are looked into. They are effective at long distances. N. Robinsoni flowered also, but it was thought best to let the plant get stronger before making a drawing of the flower. W. R.

Clematises are conspicuous now in several northern gardens, and some of the best and freshest autumn colour is furnished by them. This is in part the result of last winter, which cut the plants down to the ground and a vigorous growth with later blooming has been the result. This suggests a way of further and annually prolonging their flowering season. The terrace wall of Chillingham flower garden has several extra bright spots where Clematises are blooming, and at Eslington also in addition to C. Jackmani we noted C. lanuginosa nivea, with its delicate pale lavender flowers, also the snow-white Jackmani, which, like the other so-called white variety, is not of the Jackmani type at all, but in colour is true to its name, a lovely starry flower of spotless purity.

The Week's Work.

KITCHEN GARDEN.

Winter Cucumbers.—Plants in pits and frames are now on the move—in fact, where the bottom and top heat had to be kept up by fermenting material alone, no more fruit can be expected, as not only are the nights, but the days also too cold. This being so, a few fruits must be allowed to swell off on the earliest planted lot of winter fruiters. No more, however, than are absolutely necessary for present wants must be allowed to remain on the plants, as what the cultivator must study is the retention of all the vital force possible, as such will be wanted during the several dark, sunless months which lie before us. I have previously urged the necessity of employing as little fire-heat as possible, and as long as fair weather and moderately warm nights continue, this rule must be adhered to, as short-jointed laterals and stout, robust foliage are about the best guarantee for the plants passing through the winter free from attacks of their greatest enemy, red spider and thrips. October being past, great care must be exercised in the use of the syringe or wet foliage, through hours of darkness especially, should the thermometer fall below the minimum figure, would soon produce a yellowness and dropping of the fruit, a condition from which the plants are not easily brought at this period of the year. The best and indeed only safe way is to watch for extra fine sunny days, and then to close the house, say at 1 p.m., giving the foliage a somewhat vigorous bath with tepid soft water, and when dull and sunless to be content with atmospheric moisture. Where evaporating pans are fixed to the hot-water pipes, they should be filled with diluted farmyard liquid, the steam from this helping to ward off insects as well as promoting a healthy growth. Avoid crowding the growths, and train the shoots regularly and frequently to the trellis, pinching out the points of the leaders as they reach their limit. Surface-dress each time fresh roots appear on the top of the mounds, but beware of adding much at a time, as this only becomes sour. Half an inch of sweet fresh loam to which have been added some quite new horse manure and a little powdered mortar or plaster rubble suits them well. Let watering be done by no half measures, but allow the roots to need it, and then soak the bed from summit to base with diluted liquid at a temperature of 90°. Air cautiously, a very little serving to sweeten the atmosphere and prevent scorching, and if on sunny afternoons by reason of early closing the glass touches 80° so much the better. As a portion of this solar heat remains in the house a good part of the night, the need for fire-heat is greatly lessened. Should thrips put in an appearance fumigate mildly two nights in succession, this being safer and more effectual than one heavy dose of tobacco fumes.

Field Potatoes. — In large establishments Potatoes for the winter supply are usually grown in a field on the home farm. All varieties, even the very latest, being now ready for lifting, such should be done without further delay, as repeated rains encourage disease; moreover, many of the tubers may be destroyed by frost early in November should such occur immediately after a heavy rain. Some separate the seed portion of the crop from the refuse at lifting time. I let them both go together, and have them sorted over in bad weather by aged employés who cannot then work out of doors. Enough for some time should be stored in a cool shed and covered with dry Bracken or bags in case of frost, the remainder being clamped in the ordinary manner. If the tubers are wet when lifted do not cover down at once, but allow an interval of a few days for the sun and air to pass through and partially dry them, as under such conditions they keep much better. A good old plan is to insert a Seakale pot at the top of the clamp to act as a conducting shaft for fresh air, this being blocked up during frosty weather with Fern or straw, and left clear in mild weather. Of course, where there is plenty of spare cellarage the labour of clamping is saved, although in mild winters these places sometimes become almost too warm, the tubers losing flavour in consequence. No better place than such can be had for storing the seed tubers, as they can then be looked over at will, any decayed ones being easily detected. Where Schoolmaster and other autumn sorts are exhausted, Magnum Bonum, if from a light soil, may now be used. Those from stronger land, the tops of which were somewhat green when lifting took place, will be all the better for lying several weeks longer before being used. Imperator always eats best during the early spring months, as does Gloucester Kidney, one of the best field Potatoes which can be grown and an enormous cropper. Where Regents are grown, clamping is not advisable, as, being liable to disease, they should be stored where they can be frequently examined. Early forcing kinds, such as Sharpe's Victor, Ringleader, or Mona's Pride, which will be wanted for starting in pots, boxes or hotbeds about Christmas-time, may be placed in shallow boxes on a wet day, arranging the tubers on their ends with a little leaf-mould under them. If the sprouts get too forward they can be removed before they deprive the tuber of its vitality.

Forcing Asparagus.—It will now be necessary to collect large quantities of leaves from parks or woods, preferably Oak and Beech, for use in forcing all kinds of vegetables in winter and spring. Asparague and Seakale will be the first to need attention, and where the permanent beds are furnished with pigeon holes, spaces between the beds may be filled with leaves and stable litter about the second week in November. Use three parts leaves to one of litter, and tread very firmly at intervals as the material is thrown in. The surface of the beds must also be covered with 6 inches or 8 inches of short litter. Where these exist the best plan is to force half the beds one year, resting them the year after. From age or other causes, permanent open air beds sometimes deteriorate, and in such cases the best way is to lift the roots and force them by means of ordinary hotbeds. Make up the bed about 4 feet high at the back, sloping somewhat to the front, and when the heat has declined sufficiently, cover the surface with several inches of leaves and place thereon the roots, covering them with 3 inches of fine loamy soil. Thrust a testing stick or bottom-heat thermometer into the bed and cover the glass with Fern or straw. The same bed can be made to answer for a second batch of roots by renewing the linings, although, of course, by preparing a second bed soon enough, a blank in the supply is prevented. A very suitable place for forcing such roots is the pit of a Cucumber or Melon house, where by turning a bottom-heat valve a comfortable heat can be secured. A top-heat of from 55° to 60° will be quite high enough, as if more is given, a spindly, tasteless growth will follow. Asparagus forced in such places is much benefited by applications of manure water once a week after growth has commenced.

Rhubarb, if required very early, must soon be lifted and exposed for a fortnight to sharp frosts, it starting much quicker and stronger after such a process than when lifted and placed in heat at once. Many experience much difficulty in obtaining early supplies, simply because they try to force unsuitable varieties. The best Rhubarb for the purpose is undoubtedly Prince Albert. It is small compared to many other sorts, but the colour is good and flavour delicious. A Mushroom house is a capital place for bringing on early lots, merely placing the roots on the floor and covering them with leaf-mould. If in close proximity to the hot-water pipes so much the better, although it is not wise to place them directly over them. It will be as well to dig round some more roots intended for secondary forcing batches, leaving a narrow trench open for the entrance of frost. The next lot wanted for lifting will be sufficiently ripened naturally by the time they are wanted.

Green vegetables.—These will now be fairly plentiful, and will consist of the earliest planted Coleworts and Cabbage sprouts, resulting from old spring and early summer varieties headed close down at the beginning of August. Cabbages also which were sown specially for furnishing nice solid heads just as the frost is making its appearance will be tender and delicious. By the use of these, Savoys and Brussels Sprouts may be left alone for a short time longer, as a few rather severe frosts are really needed to impart the flavour so much appreciated in these two useful vegetables. Where, however, any early sprouts are becoming too large they may be gathered now and cooked as Cabbage, as if left they will only become tough and strong flavoured. If any late heads of Walcheren Cauliflower are likely to be injured by frost, lift the plants and lay them in moist soil or leaf-mould in a dry, cool shed. Autumn Giant or any early heads of Self-protecting Autumn Broccoli which, owing to the great heat a fortnight ago, have turned in before their usual time, may be treated similarly.

Root shed.—This should now be got ready for the housing of all roots as lifted.

J. Crawford.

FRUIT HOUSES.

Pines—fruiters.—The season so far has been favourable for plants finishing their fruits, as the weather during last month was warmer than usual at that date. There is no season of the year that these fruits are more valued than in mid-winter, and the best culture possible should be given to get good finish. More care will be necessary, avoiding extremes as far as possible, as sudden changes either in heat or excess of moisture soon affect the fruit. The temperature should now range from 70° to 75° at night, with a rise by day of 10° to 15°, admitting air during bright sunshine, and at closing time thoroughly damping all parts of the house. A slight dewing overhead if plants are in a robust condition and the fruit swelling freely may be given, but care must be taken not to wet the crowns; indeed, the syringe must now be given a rest and the house kept moist by damping floors, walls, and vacant places. Keeping the atmosphere well charged with moisture will be preferable to syringing overhead at this season. Bottom-heat will need to be brisk to get good fruit, and though it is not advisable to be frequently adding to the fermenting material at this period of the year so as to cause a check, the temperature should not fall much below 90°, and if new plunging material is required, it is well to prepare it in advance, so as to add it to the bed at the first favourable opportunity, doing the work as quickly as possible. With hot-water pipes there is far less difficulty, and if possible winter fruiters should be grown in houses treated in

this way. Moisture in such houses will be more necessary, as the roots dry more rapidly. It is advisable when watering at this season to examine each plant carefully, also to avoid as far as possible water lodging in the axils of the leaves. Plants colouring their fruits will not require further watering, and the house should be kept drier. A small pit can at times be afforded them; by this means more air can be given the plants and the flavour will be much improved. Plants with fruit fully ripe may be transferred to a warm room or any dry house. Treated thus they will remain good a considerable time. Plants intended to give fruits later should now be treated liberally if they have been rested or given a check to cause fruits to swell at a dull season of the year.

Successions and suckers.—The large plants of the first-named will probably include the best of the Queen section and those intended to start in December or early in the year. To get the best results different treatment must be given from that advised for fruiting plants. A check is now necessary, the season having produced finer growth than usual. It is well to rest gradually to get good results next season. Less heat and moisture will be necessary, syringing overhead should cease, and thorough dryness at the roots is not advised. Only sufficient water should be given to keep the roots active. The temperature should not exceed 65° at night; indeed, with the thermometer in the open under 40°, 60° will be ample, with an increase of 10° by day, airing freely in suitable weather and using as little fire-heat as possible, relying upon sun-heat during the day. The bottom-heat should likewise be low; if the same as advised for the day it will be sufficient, as the plants start much better when grown as quietly as possible from now to January. I have, to save hard firing in frosty or foggy weather, used mats and waterproof covers over the glass, and found great advantage in doing so. The plants require less moisture when treated thus during their rest. Suckers at this season will take little time, but I do not advise starving the plants in any way, as by growing suckers well fruiters are soon obtained. The plants during the summer months often have to be grown in frames and shifts made to give them a start in places heated with manure. Such plants should now be housed in their winter quarters and the treatment varied. Strong early-potted suckers may get the warm end of the house and be given more room and moisture in the way of weak liquid manure if the pots are full of roots. Although late to advise shifting, any specially requiring it may be attended to and given additional warmth when placed in their fruiting pots, watering carefully for a time. The temperature for the plants such as were potted in the summer may be 60° at night, 10° higher by day or less in cold, sunless weather, keeping the plants as near the light as possible and ventilating freely in fine weather. The bottom-heat need not be great and should not fluctuate; 70° to 75° will be sufficient for the next three months, for plants potted at time named as these will not require a shift for a time. Suckers from Smooth Cayenne and other winter fruiters should be potted up and plunged in a brisk bottom-heat.

Fruit trees grown in pots.—The trees grown in orchard houses will now be in the open, and if forced will ere this have lost their leaves, having been plunged for some weeks in a sunny exposed position. With regard to their removal indoors, much depends upon the condition, age, and when required to force. There is often a lack of house room for such plants, as Chrysanthemums require shelter, and the orchard house when heated is a splendid show house for such plants. The pot trees are benefited by a good rest if they do not get water-logged after being top-dressed or repotted. In no case do I advise turning out trees and letting them take their chance till required to force. The roots soon suffer if not protected, and large trees if unduly exposed lose a large portion of their small fibrous roots, which are just the ones required to build up a sturdy fruitful growth. If not yet done, there should be no delay in repotting or top-dressing, and in doing the former if the trees have reached the full pot limit available, a good portion of the drainage and bottom soil should be removed, using a pointed stick to remove the old soil to make room for the new. In repotting, use clean drainage, good heavy turfy loam, with such aids as bone-meal, old mortar rubble, and wood ashes, potting as firmly as possible, and taking care that heavy rains do not saturate the soil till the roots are working freely. Should the trees be at all backward, it is well to house, giving abundance of air till forcing commences. Large healthy trees should be plunged in fine ashes well over the rims of the pots, and be quite free of drip from trees or buildings. The surface should be protected from heavy rains. Now is a good time to thoroughly cleanse all trees, and in case brown scale and other pests have obtained a foothold, now is the time to get them dislodged. I advise painting badly-infested trees with a mixture of lime, soft soap, sulphur, and clay, first scrubbing the old wood with soft soap and warm water. Cherries require much care in cleaning, also Peaches and Nectarines with prominent buds, and no time should be lost in doing the necessary work. Pears and Apples are at times barren when grown in pots simply through excess of food and gross wood. The latter can be prevented by omitting the bone-meal and manures of all kind, ramming hard and using chalk or old mortar rubble in the compost.

Potting up new trees.—It often happens that trees grown in pots in the orchard house get too large, and are not so fruitful as smaller trees. Now is a good time to select Peaches, Nectarines, Cherries, Apples, Pears and Plums, potting in the material advised above and well firming the soil, in all cases being particular that the drainage is perfect. In selecting trees it is well to obtain those grown on an exposed site; these will be short-jointed and the roots less strong than in highly-fed trees. Shorten back strong roots and use small pots at the start, the difficulty with pot trees being that they soon get too large. After potting, the trees should be plunged, as advised for older trees, in an open place. In no case should manure be used unless the soil is very poor. As regards size of pots, much depends upon the variety; 10-inch to 12-inch pots are suitable at the start. It is well to have a reserve of young trees, as large ones may be given a rest in the open if desired and useless ones destroyed.

Autumn and winter Figs.—The Negro Largo is grown for winter or late autumn supplies, and in pots for this purpose there is no other variety so suitable. The trees will have been exposed freely up to a certain date, this depending upon the season the fruits are required. The trees to fruit freely will require great care. A moderate crop should be preferred, well thinning out weak shoots and stopping strong ones, giving food freely if the fruits are swelling, with a genial day temperature of 65° to 70° and 10° lower at night. Only small supplies of water overhead in dull weather should be given, as excess will cause rust and fruit-dropping. With ripe fruits more ventilation will be required and only a little water if the trees are plunged. Trees just starting should get assistance in the way of bottom heat and every ray of light possible, washing the glass and cleansing the house before starting the trees. A slow heat for the roots, such as fresh tree leaves and litter mixed, will be better than a strong one. If the hot-water pipes can be used for the purpose, do not place the pots in direct contact with them. Placing thick turves over the pipes will check strong heat.

G. Wythes.

Cottage flowers.—Fine flowers in Northumberland cottage gardens are fairly plentiful, but one thing deserving of special mention is a hedge of Mme. Desgrange Chrysanthemum, which makes a perfect dividing line between the vegetable quarters and a flower garden in a roadside cottage at Alnwick. With a few more fine days this hedge from a short distance would look like a snow-drift. The gem of cottage gardens, however, that came under our notice was one on the Lilburn Tower estate. The house was only one storey high, and a plant of Rose La France reaching up to its eaves had numbers of its great sweet drooping flowers. Canary Creeper and climbing Nasturtiums concealed the rest of the wall in a tangle of flower festoons, and Dahlias told of good cultivation both by the stature of the plants and the profuse display of bloom.

Flower Garden.

A NEW WAY TO GROW MICHAELMAS DAISIES.

I use the term "a new way" in this case because I have neither seen nor heard of it before; but as I have come at my facts from an accidental occurrence which in a striking way showed an improvement both in scenic effects and better condition of the flowers individually, it is not unlikely that others may have made similar observations, and even acted on the hints afforded. All the Asters may not lend themselves so well to the plan, but with at least a score of the finest that will, that does not matter much. To describe it in the fewest words, it is to bend in an orderly way the tall growths just before the flowers begin to open to within a foot, or less, of the surface. Few would credit the difference for the better which this makes unless they had seen it, and I think the "reason why" is obvious after all. I have tried it with not only different plants, but with stems of the same plant, *e.g.*, some laid and some left erect, and this method is at once the most conclusive and striking to my mind, as showing the advantages of the plan. The laid stems produced the larger flowers and of brighter colour, and they came earlier and lasted much longer. Of course it is not suggested that all Asters should be treated so, for in some positions we want the upstanding effects, and besides, the surroundings otherwise might not either afford the space to bend them down and around or allow the flowers to be seen to advantage if they did afford such space. Where I think the idea will best come in is in making special plantings of lines, beds, banks, or groups of Asters only. For instance, imagine a mass of the pale blue Robert Parker, the dark blue Archer-Hind, or even the small-flowered cordifolius elegans and the delicate Diana so bent or trained that their myriads of flowers would form a dense mass, 18 inches from the surface, so managed in the pegging that hardly anything but flowers could be seen, all improved in quality as stated. I say, imagine this, but you scarcely can, so much will the aspects of these plants be changed, for, mark you, they are all taller than we would wish when grown in the ordinary way. I do not overlook that these and nearly all the Asters have a pleasing habit of forming noble panicles in the erect form, which, for cutting, could never be improved; but I am now speaking more of garden effects, and the way the laid stems fill out and the branchlets turn skywards in a few days after being pegged clearly show us certain capabilities that in some circumstances might be turned to good account.

By this bending-down system you at least save the flowers in a great measure from being battered to pieces by high winds, and however you stake and tie—which always have to be done for some tall and top-heavy sorts and which as certainly take from the beauty of the specimens—it is but a poor measure against the stormy weather usual at Michaelmas. Then, again, in some exposed gardens the tall Asters are im-

practicable, but by this bending-down method there need be no fear whatever.

The way to do it is to simply get a quantity of hooked sticks 2 feet or less long, bring the stems forward and catch them down to within a foot of the ground, distributing them evenly over the surface to cover ; then the more backward plants should be brought so as to overlap the bare stems of the front row, and so on. In four or six days the heads will adjust themselves, the branchlets facing upwards and going out laterally. This should be done, as already hinted, some little while before the flowers begin to open, care being taken not to snap the more brittle stems, such as those of the cordifolius group.

To my mind this is all worth the pains because of the better size, colour and duration of the flowers, but it occurred to me that at the same time diverse garden effects might come in too by the pegging-down process.

Woodville, Kirkstall. J. Wood.

Disease in Lilium candidum.—A few weeks ago I came across the finest lot of L. candidum bulbs that I have ever seen. They were simply enormous as well as solid and heavy. I made particular inquiries as to the source from which these imported bulbs were procured, and eventually ascertained that they had been grown in the neighbourhood of Toulon. The question then occurred to me : Is it possible that these splendid bulbs are the produce of plants affected by the disease, and can it be that this plague only attacks imported bulbs after their change of climate? I have no knowledge of Lily culture in France, but perhaps some correspondents have seen Lilies growing there, and could inform us whether the disease is as prevalent in the south of France as it unfortunately is in England. "H. H. M.'s" interesting letter (p. 115) is very much to the point as regards the disease, and I am glad to see that he agrees with me as to its being an importation. Some of his instances of old-established bulbs that had for years flowered well contracting the disease are, however, adverse to my theory, founded on personal experience, that home-grown bulbs, though planted in close proximity to diseased foreign bulbs, do not fall a prey to the epidemic. In my case the lethal spores had not to be carried miles, but only 2 yards—from the row of one hundred diseased French bulbs to an English-grown clump—yet the latter never showed the least sign of being affected and this season is finer than ever. Still, it is quite possible that this immunity may have been but a stroke of good luck. I have tried "H. H. M.'s" baking process, but the disease has so weakened my imported bulbs, that I fear they will be scarcely strong or large enough to bloom next season.—S. W. F.

Winter Violets.—Violets in many places are this year in a pitiful condition, owing to the attacks of red spider, the result of too little moisture both in the atmosphere and at the roots. Plants that are growing here and there in any spare border are covered with spider, while those on specially prepared shady plots are in a much cleaner, healthier condition, this fact showing the necessity, especially in dry seasons, of good cultivation. Mine are not quite so robust as usual, not because they are affected by spider, but because, having been grown on the same ground for ten or twelve years, the roots have partially exhausted the staple soil in spite of the biennial additions of good loam, leaf-mould and road grit. Being the best position I have for my Violets, and intending still to grow them there, I purpose during the coming winter taking out 18 inches of the border, replacing it with the same depth of good new loam and correcting materials ; this will again produce a stout, free growth. Light frames or pits quite free from drip are necessary if the plants are to do well through the winter and spring months, and full exposure during fine weather. When cutting winds prevail the lights must be drawn up and tilted, or the young foliage will suffer. I always give a good soaking after planting, repeating it in a few days' time, after which I never water till February. I have read of those who mulch their frame Violets with cocoanut fibre, in order, as they think, to prevent damping, but I should not care to do it myself, as it must shut out air and what sun's warmth there is in winter from the roots. Abundance of fresh air and occasional surface-stirring and removal of all yellow and decaying leaves are necessary. Those whose plants are crippled with spider should dip each one in sulphur water before planting, but they had better throw them away in spring and obtain a fresh stock of runners from some other source.—J. C.

Hydrangea hortensis.—In the autumn the display afforded in the west country by the great Hydrangea bushes in full flower is very striking. In one garden they are to be seen lining the drive from the lodge to the front door. In another, great masses of bloom stand out from the dark evergreens of the shrubbery. In a third, the shady woodland paths are brightened by a profusion of their massive flower-heads. In some situations the flowers lose their usual pink shade and are of a light blue colour, which change is generally attributed to the presence of iron in the soil. It may often be noticed that on the same plant both pink and blue flowers are produced as well as some of intermediate shades. The brightest blue that I have ever seen in Hydrangea blossoms was borne on plants growing along the edge of a cliff overlooking the sea in the vicinity of Start Point, South Devon. They were situated at the verge of a gravel path and were exposed to the full glare of the sun and the force of the landward gales. The hue of the flowers was almost that of the Forget-me-not, and the plants were smothered in bloom. —S. W. F., *Torquay.*

LILIUM HARRISI.

Where it is intended to lay in a stock of this Lily for flowering in pots no time should be lost in obtaining the bulbs if this has not already been done, for even if they are not required for early flowering it is much better to pot the bulbs and let them root and grow gradually than it is to keep them in a dormant state too long. It should be borne in mind that most of the immense importations from Bermuda reach this country within a limited period ; hence, if the bulbs are not purchased till Christmas or thereabouts—as is often the case—they will have passed some months probably on shelves in a dealer's warehouse, and in that time a great waste of tissue takes place, and consequently the plants cannot possibly be as vigorous as they would be if potted at the proper season. Where they are not unpacked and laid on shelves, but allowed to remain in the boxes, roots are pushed forth from the base of the bulbs into the sawdust generally used for packing them, and in trying to disentangle the mass many of the roots are broken and considerable check thereby given to the plant. Another drawback is, that if allowed to remain in the boxes too long the stem is pushed out, and being so brittle it is easily injured in unpacking. If the bulbs of Lilium Harrisi are potted and placed in a cold frame the lights of which are only used to ward off the heavy autumnal rains, they will root slowly and surely, and may be had in flower nearly, if not quite, as late as those kept out of the ground so much longer. Where required for early blooming, the bulbs of L. Harrisi should of course be potted as soon as possible, so that they will at once commence to root, for it is useless to attempt to force them till the pots are well filled with roots.

This caution concerning the detrimental effects of potting L. Harrisi too late in the season might well be applied to all other Lilies, and indeed to bulbous plants in general, for one sees bulbs of all kinds of Lilies exposed for sale long after the period they should have been in the ground. L. candidum in particular is harshly dealt with in this way, for if moved at all this should be done as soon as possible after flowering ; whereas one may see them in a dry state till the new year or nearly so. It is of course useless to expect such as these to flower. Freshly imported bulbs of the Japanese Lilium auratum may often be had in pretty good condition till spring is well advanced, and the different dealers frequently receive applications for dormant bulbs till nearly midsummer. Hyacinths, Tulips, Narcissi, Snowdrops and such things, which should be planted or potted early in the autumn, are frequently ordered from the dealers about Christmas, or even after, when if the goods are supplied the display will be of course unsatisfactory to both vendor and purchaser. H. P.

FLOWER GARDEN NOTES.

Planting herbaceous borders.—The arrival of frost and the necessity of making a clean sweep of all dead and decaying flowers will enable the planter to get to work on herbaceous borders as soon as possible, with the view to get most of the work finished before severe frost puts an end to operations of this kind. The notes that were taken from time to time all through the season in connection with the inmates of these borders will now be of the utmost value towards strengthening weak points and increasing the quantity of specially good things. This latter work is imperative, for the really good things are so numerous and their propagation as a rule so easy, that the annual weeding out of indifferent subjects is a first consideration. Again, all things that are the better for annual lifting and replanting should receive attention and all stragglers be taken away. Borders of this kind should be planted as naturally as possible, but at the same time one does not want absurd mixtures, and to allow one species to encroach unduly on another will be greatly detrimental to the weaker plant. When replanting the front of the border, for instance, with such things as the Hepaticas, Heucheras, or the stay-at-home Campanulas, a wide berth must be given to straggling Violas or the trailing Bellflowers, as, unless a sharp look-out is kept towards the end of the season, the plants of more compact habit will be completely smothered. Due regard should also be given to the height of the different species, and if any mistake has been previously made it should be rectified. I do not mean that the planting should be severely regular to resemble a shaven slope ; this is altogether a mistake, a broken outline being one of the most pleasing features, but that very tall subjects should not find their way to the front to the prejudice of their immediate neighbours. If groups of plants having bulbs or corms are to be used on herbaceous borders the spots should be carefully marked by labels that are not likely to be displaced, and I have found it a good plan in such cases to indicate not only their whereabouts, but the size of the clumps. This may be done by placing the label in the centre of the clump and noting thereon the number of inches, twelve or eighteen, as the case may be, so as to give an idea of the edge of the same, and if care is taken in the planting, an accurate estimate of the proximity to other things can be formed. Again, a nice balance of colour, not a preponderance of one particular shade, should receive careful consideration, a remark that would apply to all parts of the border. Masses of Carnations and Pinks should be relieved by nice shades of blue, and the perennial Sunflowers broken by the softer hues of the Starworts ; the best foliage, too, as supplied by the Pyrethrums, Spiræa filipendula, and others of a similarly graceful habit will act as an admirable foil to groups of bright colours. The advisability of so planting as to give a level balance of flower right through the borders at all seasons of the year can hardly be over-rated, that is, not to put too many spring, or summer, or autumn flowers together, so that in given spots there is a mass of bloom at one particular time and little or nothing for the remainder of the year. A last note of warning will be to be always chary of using too many

short-lived flowers, such, for instance, as Columbines, Pæonies, and the like. They are very handsome for a time, but the fact that they are so soon over considerably handicaps their usefulness. Also anything that is constitutionally weak or is subject to disease, as, for instance, Lilium candidum, should be sparingly used. A collapse at an unexpected moment is awkward, and leaves a gap it is not always easy to fill.

Spring flowers.—Beds cleared of summer bedding plants that are to be utilised for a similar purpose another year may be planted with spring flowers that are waiting removal from nursery beds. Wallflowers are certainly the most useful of spring flowers, and the variety of shades has undergone considerable improvement within the last few years. It is very seldom that one has the misfortune to lose Wallflowers wholesale as we did last spring, the percentage saved being barely five in a thousand, and it was dealt out impartially, no one variety coming out of the ordeal better than others. Polyanthuses may be used largely if plenty of time is available in late spring to clear them away and prepare the beds for summer plants. A great point in the planting of these temporary things is to regulate the work in such a way that beds required early another year may be filled with plants that are quickly over or the sacrifice of which whilst yet in flower is not much regretted. A good strain of Polyanthus is, on the other hand, sometimes at its best, especially in a rainy season, at the time when the earliest summer flowers should be put out. E. Burrell.

Claremont.

Cosmos bipinnatus.—As a late-flowering annual, this and its charming white variety deserve attention. Elegant in its leaf formation, though a little irregular in growth, it is an excellent subject for blooming late in summer, and Mr. E. Beckett employs it at Aldenham House Gardens largely in a long border of mixed annuals. The species has rose or purple, small, chaste, Dahlia-like blossoms, from their elegance well adapted for cutting, those of the white variety forming a very pleasing contrast. Seeds can be sown in spring in a gentle warmth, and plants grown on to put out in June to bloom.—R. D.

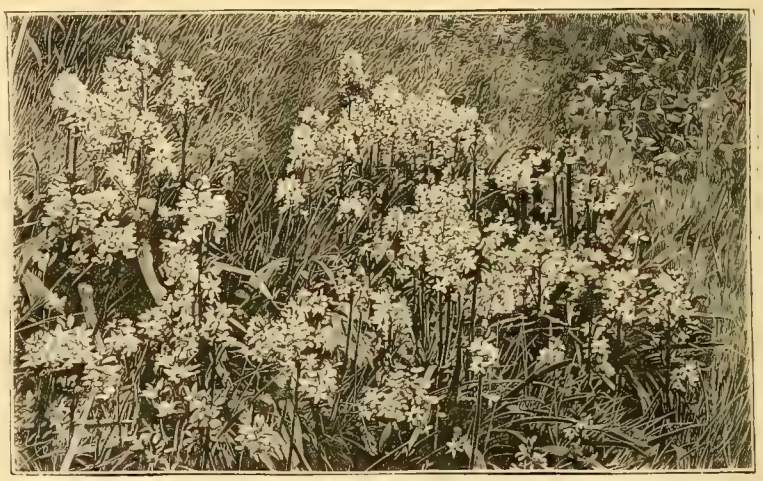
Notes on Lilies.—In an article on these a correspondent has drawn attention to Lilium Melpomene, a variety of speciosum, which he says was brought out by Mr. Hovey, of Boston, U.S.A., and was stated to be a cross between auratum and speciosum. Mr. Hovey never stated this to be the case, and your correspondent has confounded another Lily with it. Mr. Hovey raised a number of seedlings from speciosum, and nine of these were selected, which he inscribed to the Muses. Of these, Melpomene was the only one of the nine that seemed to him after some trial to be worth preserving, and it was propagated and sent out as a variety of speciosum. Its bold and distinct colouring was very attractive. The only one of the varieties in the catalogues which approached near to it was superbum, and I very much fear that that variety was substituted in many instances for it; in fact, I have found this to be the case, and a very strong-growing Melpomene I have found to be little more than superbum. It is no wonder, then, that your correspondent could trace nothing either in the foliage or the flower of the auratum blood in it. Some years ago, however, there was a variety raised in America by Mr. Parkmann which was evidently a decided hybrid between auratum and speciosum, partaking of the character of both. This was, I believe, once exhibited in England, though I did not see it, but a coloured plate of it appeared in the *Florist*, and attracted a good deal of attention. A well-known English firm purchased it, and I believe it never could be increased sufficiently for sale, and whether it is still in existence I know not. I have very little doubt that your correspondent has unwittingly confused these two Lilies. It has, however, always seemed to me very strange that no hybrids have resulted from intercrossing these two species. The organs are so large and easily manipulated, that they would seem to afford no difficulty, but although various hybridists have tried them there has been no result, with the exception of the one above named.—Delta.

THE SPANISH SQUILL.

(Scilla campanulata.)

For gardens where the soil is strong clay there is no bulb more suitable for naturalisation than this. It is much more effective in the mass as well as more lasting than our native wood Hyacinth or Bluebell, and increases even more rapidly than that widespread bulb. Planted among Grass under trees or on wild banks, it will take care of itself and yearly increase in beauty. In the garden where this engraving so prettily shows the growth of this Spanish Squill the original bulbs were planted early in this century, and have now spread far and wide, scattered in a curiously happy way over several acres of semi-wild banks, where in spring, especially in May, they make a lovely picture. Of later years considerable quantities of London Pride and mossy Saxifrages have been planted in large and irregular masses with an exceedingly good effect. The combination of soft pink, lavender, blue, and clear white under the fresh canopy of green leaves, renewed each spring, is a delight to all lovers of woodlands and such vernal joys.

Scarborough. E. H. Woodall.



The Spanish Squill (Scilla campanulata) naturalised. Engraved for The Garden *from a photograph sent by Mr. E. H. Woodall, St. Nicholas House, Scarborough.*

Withania origanifolia (belonging to the Nightshade family) is scarce in gardens. It is widely spread throughout Brazil, Buenos Ayres, Monte Video, Patagonia, &c. It has been found on the plains of the Pampas 500 to 600 miles inland, rambling on the ground amongst bushes and shrubs. It was introduced about 1825. If accidentally seen in a botanic garden it looks very much like a poor useless weed; but when properly cultivated it is one of the best and most useful climbers we can introduce into gardens. From its long, fibrous, perennial roots spring in March and April numerous slender stems, which attain during the summer a height of 6 yards to 10 yards. These stems are covered with small, ovate or rhomboid, short-petioled leaves, the whole plant (leaves and stems) being of a very bright shining green colour. From July till frost comes the plant is literally covered with small, minute, nodding, pure white, sweet-scented flowers, which are produced in great profusion. The contrast of the white flowers upon the dark green elegant foliage produces a most graceful, compact mass from top to bottom of the plant during the whole summer, which can be compared for elegance with Gypsophila paniculata only. I think it can beat every other plant for covering summer-houses, pillars, trellises, bowers, walls, &c., the foliage being as green and fresh in October as in July. The fruit is a small green berry, bright scarlet when ripe, rarely produced. It is of the easiest culture. In November cut down the stems and leave alone until the following spring.—D. Guiheneuf.

NOTES ON HARDY PLANTS.

Aster Novæ-Angliæ roseus.—This is perhaps the tallest Michaelmas Daisy of the New England group, not that its stature of 5 feet to 6 feet is a very commendable quality, but it may be useful to point it out as fitting the plant for the back line of the herbaceous border. It is also perhaps the least seen of its class, though the rosy flowers are both abundant and distinct. Perhaps I should mention the honey-like fragrance of the heads and that it is earlier than ruber.

Aster Novi-Belgii Ella.—This is a new variety that occurred by chance in the gardens of the Rev. Wolley-Dod. It is a striking sort, very vigorous, with dark foliage and stalks 5 feet or more in height, coming in early with its very large and full flowers. With the exception of two or three others, such as Thomsoni, the Amellus group, and Novæ-Angliæ præcox, its flowers are of the largest and also the fullest in the ray, the colour a pleasing mauve.

Aster Novi-Belgii Nancy.—This is another newly-selected seedling of Mr. Wolley-Dod. Its stature with me in dryish light soil is 3 feet to 4 feet, and it is one of those kinds which show their abundance of flowers all, or nearly all, at once. In this case the heads of bloom are of medium size, but it is the fulness of the rays and silvery mauve tint that render the abundance of flowers so conspicuous. It comes rather near to a kind I have grown for ten years or more as decorus. The heads, however, are a little larger and the rays not quite so sharply defined as in that old dainty variety.

Wild Michaelmas Daisies.—We are now getting accustomed to new and improved kinds, and it may be useful as well as interesting to mark progress sometimes. It is no unusual thing to forget what we have left behind, and in the case of some flowers we may well do so, but with the Asters the past may help the future, especially with those who desire to know more about types or groups. From a strictly florist's point of view, too, it may be well to recall the old forms in order to see the great progress that has been made in a few years, as well as to urge us on in the developing of those improvements of which the perennial Asters are clearly capable. These

thoughts occurred to me as I looked over a lot of wild forms of various types that reached me nearly two years ago. We often hear from our American friends of how showy the "fall Daisies" are. What would be the effect if similar masses of the better garden kinds could be seen? Seedlings are everywhere flowering this year, and nearly all are such that one does not care to pull them out, at least till the flowers are done, and many are worth a place and a name. Even on old walls I see stunted specimens flowering prettily. The effect is vastly superior when one sees large groups of one kind.

Polygonum sphærostachyum.—This dwarf and knob-rooted species often flowers a second time in the autumn; indeed, speaking from a five or six years' experience of it, I think it never fails to do so in the case of plants that are happy, *i.e.*, in moist vegetable soil and full exposure to sunshine. The spikes of flower on plants but 9 inches to 12 inches high are 2 inches long and of the intensest vermilion-scarlet, a somewhat different shade at this season from that of the longer days of June, but for that matter the individuals vary in themselves, and you may cause them to vary still more by placing them under different conditions culturally. The plant is hard to kill, but you may easily influence it in bloom colour or to bud blindness by wrong treatment; the one essential of all is moisture. Treat it as a bog plant in the less swampy parts. I find it does quite well in the bottom or dish-formed parts of the rock garden.

Shortia galacifolia.—It is well worth while to grow this pretty plant in patches for the sake of its rich bronzy or red-brown foliage as seen at the present season, and it is a feature all the more valuable because the foliage is persistent all the winter and retains its rich warm tints.

Woodville, Kirkstall. J. Wood.

MICHAELMAS DAISIES.

Hardy flowers are largely grown in the gardens at Ham House, Richmond, and at this late period of the season perennial Asters form a prominent feature. Many were on the 12th inst. long past their best, but some others later were in beautiful bloom. How valuable are hardy flowers that only bloom so profusely as these do during October, but are then at their very best. It was not difficult to make up a fine nosegay of these fresh, charming Daisies with yet late, though straggling Sunflowers, of which one with tall and naturally late flowers of medium size and single, which came from Miss Jekyll's garden at Godalming, is, for the season, the best. The pretty Erigeron philadelphus is also blooming freely, because being hard cut earlier, it flowers again in the late autumn. A few charming blooms are gathered from Chrysanthemum cinerariæfolium, an exceedingly pretty variety, and the laciniated form of C. maximum also gives a few late flowers. Then the pretty blue Echinops Ritro has thrown up many late flowers, and these give to the bunch very welcome colour. So also do the perennial Gaillardias, the flowers being of more agreeable dimensions than in the summer. But with the exception of the best late Asters most hardy things are practically over, any few blooms furnished being from late growths or side shoots. Even Chrysanthemum uliginosum is practically over, for the recent winds and rains so beat and battered the large single blooms, that hardly a perfect petal is left. This is for so late an autumn bloomer not at all satisfactory, because the flowers so soon exhibit evidence of collusion with each other, being so tall and loose-stemmed. Of annuals very pretty and almost alone, some plants of Chrysanthemum tricolor and Dunnetti gave really charmingly fresh, bright flowers, leading to the conclusion that these sown later than usual would be particularly useful for late cutting. It is very evident, however, that out of the great mass of Michaelmas Daisies grown here and elsewhere, the most useful, as well as the best generally, are those which bloom late. Such hardy flowers at their very best are brightest in October, are far more useful then than are earlier ones in September, especially when other flowers, hardy and tender, are in profusion. Of those at their very best at Ham House in the middle of October were Aster cordifolius, a very graceful and elegant variety, blooming to a height of 4 feet. The flowers are small, of a bluish white colour, borne on large branching spikes or heads in wonderful profusion. Anything more charming for cutting could hardly be found in the family. Very pretty indeed is a form apparently of ericoides growing 20 inches in height, flowers white, just like small, natural Daisies, also of spike form and branching very freely. A pleasing pale blue-flowered variety is A. Novi-Belgii Flora, height 5 feet, and carrying a mass of flowers. A. Novæ-Angliæ roseus, ruber, and pulchellus are also very fine, tall, and attractive sorts, in the height of their beauty. A. grandiflorus, 3 feet in height, flowers large and deep purplish blue, is one of the latest, only just opening its blooms. This should make a capital variety to grow in pots for flowering late in a greenhouse. A very pleasing variety is a rather taller form of ericoides than the one previously mentioned. Michaelmas Daisies seem to be very variable, and some need to be grown for two or three years to reveal their true character. A. D.

Perennial Gourd (Cucurbita perennis, Asa Gray; Cucumis perennis) is seldom met with in gardens. The roots are large, fleshy, whitish, of the size and shape of a Beetroot, the stems annual, climbing or trailing. The male flowers, large, yellow, with a scent of Violets, are produced from July until frost comes; the female flowers appear much later, sometimes not at all. The fruits are globose, the size of an Orange, spotted or variegated with white and yellow when ripe. If allowed to trail on the grass it forms an immense circular bed or carpet 10 yards to 15 yards in diameter; planted at the foot of a tree and allowed to climb into the branches, the stems soon fall and spread all round in a most graceful manner. It is also valuable for covering walls, trellises, &c. The roots will stand our most severe winters. It prefers a very rich, deep, well-manured soil—calcareous if possible. In autumn, when frost has destroyed the leaves and stems, it is well to cover the roots with a heap of sand or dry leaves. The best time for planting is March or April; it increases easily from seeds sown in spring. Keep seedlings in roomy pots, winter under a cold frame, then plant in the open ground. The roots produce numerous suckers, which can be used for planting exactly as seedlings. It is a native of North America, Texas and California, and was introduced about 1840. In the Jardin des Plantes in Paris there is a fine specimen trailing on the grass. It is very attractive, but never produces fruit, whilst other plants covering the back of a house fruit every year.—D. Guiheneuf.

Gaillardias.—Gaillardias are among the most useful of our hardy border flowers. They are each year becoming more and more popular, and are simply indispensable where cut flowers are needed in quantity during June, July and August. In fact, the same roots will continue to throw up not a few blooms right into the autumn. One of the chief recommendations of the Gaillardia is its power to endure a long period of drought. All through the tropical summer of 1893, and again during the present season, Gaillardias were to be seen on all hands erect and covered with flower, while many of their herbaceous associates were prostrate and half dead. The present month and during the first half of November is a good time to plant, giving them, if possible, a somewhat sandy soil, although really they are not fastidious either in regard to soil or situation.—J. C.

SHORT NOTES.—FLOWER.

Dahlia Mrs. Peart.—Can any reader inform me if this Dahlia ever gives a perfect blossom, *i.e.*, without showing the yellow centre? At the Dahlia show at the Crystal Palace last month it was not very much exhibited, and not at all in the best stands. I do not remember seeing any blossoms which did not show the yellow centre more or less.—C. W.

Aster salicifolius.—Among the most charming of Michaelmas Daisies is the above-named. I noted a fine bushy specimen in September literally covered with bloom. The individual flowers are tiny and blush-coloured. For the decoration of vases and the like its branches of bloom are exceedingly dainty.—S.

KITCHEN GARDEN.

WATERCRESS GROWING.

A few weeks ago I was afforded the opportunity of inspecting some Watercress beds of considerable extent. These beds were situated in the county of Dorset on the chalk, and lay in a shallow valley, through which a somewhat sluggish stream flowed hither and thither among River Grasses, Water Reeds, and Bents. I found that a straight course had been formed into which the stream had been turned, and an embankment constructed between it and the old waterway, not a drop of its water being allowed to permeate into the adjoining Cress beds, which had been made out of the ancient channel of the stream, and were supplied with water drawn solely from the chalk springs that welled up in profusion, and, where these proved insufficient, from Abyssinian wells bored to the depth of from 80 feet to 100 feet. This water, coming from a depth, emerges from the springs and wells at a temperature of 50° throughout the year, which warmth keeps the Cress growing through the coldest weather, the necessity for the rigid exclusion of the cold surface-water which would at once chill the beds and prevent the growth of the Cress being immediately apparent. Watercress culture on a large scale is only possible during the winter and spring months by the use of this warm, pure spring-water, the practicability of producing Cress at this season of the year while using sewage-contaminated surface-water, which report said was a practice in vogue, being strenuously denied. It is candidly admitted that, when the weather becomes warm, Watercress will thrive in any damp situation, but until that period arrives it is averred that there is no chance of the water in which it is cultivated being impure.

The beds are of gravel and are absolutely level from side to side, in order that the water, which is about 3½ inches deep, may flow over all parts with equal rapidity. Should, by reason of springs breaking up or from other causes, the bottom become uneven, the water does not circulate freely, and in some places has a tendency to become stagnant, thus freezing in the winter, and thereby causing the ruin of the Cress and allowing the frogs to spawn in the sluggish spots during the spring. Transverse and diagonal watercourses are kept clear of Cress here and there in order the better to regulate the even flow of the water. The Cress is propagated either by cuttings or by rooted plants, the latter being merely laid down on the gravel with stones on their roots, and the former inserted between the pebbles of the bed. Once a year, sometimes oftener, the beds are renewed. The months during which the bulk of the crop is cut are February, March, April, and May, although a certain amount of cutting goes on throughout the year. The grower to whom I was indebted for my information and my visit of inspection had about 6 acres under Cress in Dorsetshire, and was interested in beds of more than double that acreage in the county of Hertfordshire, from

which latter beds 300 tons have been picked and marketed within the year. The Cress is, for the most part, sent to market in flat, oblong, covered hampers containing half a hundredweight.

The grower has many enemies to contend against, the chief of which is the caddis fly, for which the shallow, gravelly Cress bed is an ideal resort. Armies of these larvæ often feed on the roots of the Cress, when their progress can be marked by the yellowing leaves, while the extermination of the pest seems to be an impossibility.

There are many varieties of Watercress, but the distinctions are only recognised by the *cognoscenti*, the knowledge of the public being limited to a capacity for discrimination between the dark-coloured winter Cress and the light green, which is chiefly grown in the spring. The eccentricities of fashion may be instanced by the fact, that while in one town the dark Cress is favoured, at the neighbouring city only the light is sought after.

The industry is no new one, certain of the beds now in existence having passed from father to son for three generations, while tradition has it that the breakfast table of King George III. was daily supplied with Watercress from the neighbourhood of Reading.

S. W. F.



Trichomanes radicans. From a photograph by Miss Willmott. (*See p.* 316.)

Celery Brydon's White.—There is still room for a good solid, early white Celery that will not run to seed, as early batches frequently do; and in the opinion of Mr. Oliver, of Eslington Hall, such is forthcoming in the variety above named, of which he has had two very fine rows this season, and at the time of our visit much had then been already used. Not a plant had run or shown the slightest tendency to do so, although the heat and drought of September, which were severely felt even in northern gardens, are conditions that often cause premature bolting. Mr. Oliver dug some for our inspection, and the heads were as large, long, solid and crisp as those of later growth would be.

Brussels Sprout Dwarf Gem.—Most varieties of Brussels Sprouts have a tendency to coarseness, the huge sprouts being deficient of that mild flavour so much valued in this vegetable. Dwarf Gem may be termed distinct in habit, the plants being sturdy with compact foliage. The sprouts are medium-sized and the flavour excellent. I would also desire to note the value of these compact growers in such winters as the last, when the larger kinds were much injured, whereas this stood well. I find for late supplies the above will give a good return, as though dwarf, the buttons are much closer together than in the larger kinds.—G. Wythes.

Broccoli Snow's Winter White.—Requiring winter Broccoli in quantity, I have for many years depended upon the above. Of late years, however, I have had but little success, and this season I am worse off than ever. I am aware one must make allowances for the exceptional weather experienced through August and September, the heat being great, with slight rainfall. On the other hand, all vegetables have suffered more or less, and I do not see why this Broccoli should fare worse than the Self-protecting. An early lot grown for November and December supplies is poor, and many plants have failed to form heads, and what are formed are totally unlike those of Snow's I have grown in former years. This variety was noted for its medium-sized, pure white heads, the flower also being well protected. I admit it was not hardy, but those who knew its character and took the precaution to lift as soon as the heads were formed were well repaid by having choice material for the late autumn supply. I have another large quarter planted for mid-winter supplies, and these plants, though from another sowing and different seed, look as much unlike Snow's as I have ever seen. Culture may be at fault, as in such seasons the sowing may have been too early. I usually sow this last lot in May, planting out early in firm land just cleared of winter Spinach or early Peas. Have any readers of The Garden noticed any defects in this variety? I fear the true Snow's is a thing of the past; at any rate, I have not had it of the same quality as I had fifteen or sixteen years ago. Seed firms advertise this variety largely, but is it the original stock? I know that vegetables will soon lose their true character unless special means be taken with the seeding and selection, but I fear another variety is substituted for Snow's. This is a serious matter to the grower, as it makes a gap in the supply at a season one cannot make up the deficiency.—W. S.

Potato Boston Q. Q.—Having been favourably impressed with the above variety last season, I obtained about a peck of seed and was disappointed at the results. This year I planted a bushel of seed, putting the rows 3 feet apart with half the distance between the sets, thinking it desirable to give it a further trial. Like "E. M." (page 259), I am much dissatisfied both as regards crop and quality. I admit the soil, like that of "E. M.," is not at all good, but such kinds as Magnum Bonum have never failed. Though it is not a good Potato season, the tubers of Boston Q. Q. are of poor shape and with very deep eyes. This I should not mind if the quality and crop were better or as good as stated by "W. S." I have now determined to give up its culture, there being so many good Potatoes one can rely upon.—W. S. M.

Over-grown vegetables.—This is evidently a failing of the season judging from remarks made by other correspondents and from my own experience. It is really surprising what luxuriance there is in the several sorts of winter greens, Brussels Sprouts, Savoys and Broccoli when the ground has been so hot and dry for so long a period. A large breadth of Earley's Hardy Winter Green, Cottager's and Sutton's Arctic Kale planted

on ground neither dug nor manured this season, and which produced a good crop of Brussels Sprouts last year, has grown more strongly, unfortunately, than any I have ever seen before, and will, I fear, should cold weather set in, be badly crippled. Sprouts are similarly luxuriant and not proportionately early in "buttoning" up, and the heavy rains of the past few days will not tend to mend matters very much. Savoys, too, have a tendency to a large leaf development, so also has Broccoli, but the last-named can be checked by laying where this practice is carried out. During the excessively hot September days there was a very heavy dew deposited on growing crops, and this with the attendant coolness of the early mornings no doubt stimulated the excessive growth complained of. I have not been able to get a satisfactory growth in Spinach for winter use until this autumn; no matter how treated, it absolutely refused to grow strongly in this garden, but at the present time its luxuriance is such as to almost give rise to complaint, fearing the consequences of severe frosts later on.—W. S., *Rood Ashton, Trowbridge.*

NOTES FROM STRAFFAN, CO. KILDARE.

The gardens at Straffan are worth visiting at all times of the year. Even on the coldest and most dreary day in winter there are green turf and silvery-barked Birch trees, and the glow of crimson Dogwood and of golden or of cardinal Willows beside the river Liffey—here clear and pure as it leaves its native hills. Even in February, with its snow or its Snowdrops under the red-twigged Lime trees, Straffan is more cheerful and hospitable and flowery than many places much milder and nearer the sea. But to see Straffan gardens in April, or May, or in June or July, or in September and October, is to see a flowery and a fertile place sheltered by tree growth through which there are charming views towards the hills beyond. Just now when the Beeches, Chestnuts and the great Limes are putting on their autumnal tints of brown and russet, or red and crimson, or lemon and gold, there is colour everywhere high up against the blue sky or in front of the old red walls. The Roses are not what they were, but veritable jungles of Fuchsias, Dahlias and Sweet Peas, and meadows of Mignonette, Rosemary, Lavender, Sweet Verbena and Heliotrope send forth their fresh odours, double-distilled during these almost tropically hot days, far into the mist and moonlight of the balmy nights. Never perhaps was the flower garden quite so brilliant as it has been through these torrid days of sunny autumn. So also the grace of stem and leaf is there, Bamboo, Arundo donax and Eulalias, or Fan Grasses of Japan, and the hundred and one things on wall and in hedge or on bower that go to make up a garden of infinite delight.

Under a blazing sun it is pleasant to watch the speckled trout dart here and there into the cool deep pools, or by the shaded banks of the river while the wood quests call softly to each other in the Scotch Firs or Beech trees near, and the water hens flutter amongst the reeds, and the robins sing again their sweetest of autumn songs, while high overhead the herons wheel and float as they go down to the shallows for their supper from the stream. The flowers may be larger and sweeter and the fruits of more exquisite flavour elsewhere in a thousand gardens, but on these points I firmly believe that Straffan can afford to be silent, as many a feverish and care or pain-worn hospital patient can testify, and this year in particular there is fruit of the best and enough to spare. The small fruits, such as Strawberries, Currants, Gooseberries, Cherries and Raspberries, were difficult to clear off, and now it is the same as to the gathering of the Apples and Pears. And this year the glory of exquisite colour is everywhere on Japan Maples, Tulip Tree and Japanese Creepers alike. Veitch's Creeper, now to be known as Vitis inconstans, has been like a crimson curtain, or like the rich dyed rugs and velvets hung outside the casements in Venice on a festa day. So also the scarlet Tropæolum and its first cousins, the Canary Creeper and the red-flowered tuberous-rooted kind, have all been trying their best to strangle and hide the Roses on the walls.

One specially pretty feature at Straffan is the garden lodge with its Rose and Clematis and Japanese Honeysuckle garniture on the walls and around its windows. Vivid are the Begonias and sweet the white odorous Tobacco and the night-scented Stock beside the open door, and for the curious there is a little wall of choice alpine plants that is an ever-changing, ever-turning page on which there is something written for every day of the year.

In one of the cool greenhouses the Chilian Bell-flower, or climbing Lily of Peru, is this year fruiting freely for the first time here, and there are choice Orchids and Ferns, and rare stove and greenhouse plants under glass everywhere. A strong plant of Vanda Sanderiana has a spike of seven flowers of large size and soft and exquisitely modulated colouring. The new Dendrobium Phalænopsis Schrœderianum is also blooming freely; so also Ondontoglots and Masdevallias and Oncidia of the O. curtum and O. Forbesi types, while the Phalænopsids are healthy and vigorous, a sure sign of the gloriously soft rich floral wreaths to come. Here in one corner is a mossy pot containing a hundred or so healthy seedlings of Ramondia pyrenaica; here is the rare Oak-leaved Myrtle and the double-blossomed kind in full flower. Hedychium coronarium rivals the finest of Orchids in sheen and in whiteness and in its exquisite perfume. Rarely have I ever come across the dainty little Davallia parvula so fresh and dense and mossy as it is here grown, though I have seen it on mossy tree trunks and branches at home overhanging the Bornean rivers and streams. One remarkable specimen of Hæmanthus Catherinæ, bearing nine of its great globular spikes 2 feet to 3 feet in height over its spreading light green Crinum-like leaves, had just gone out of bloom, but a photograph bore testimony to its gorgeous beauty as seen in its glowing hue of scarlet petal and gold-tipped anthers when at its best. So also the flower of the gods from Table Mountain, Disa grandiflora, was past its best, but the old spikes showed plainly what a gorgeous display it must have made. One mass of Lælia anceps throwing up twenty-nine spikes promises much beauty later on, and a batch of the vivid crimson-scarlet Begonia Frœbelli lit up one of the greenhouses with its brilliant floral fire.

Speaking of colour reminds me that on one of the walls here is a young plant of Vitis hederacea, supposed to be the common old Virginian Creeper, but its foliage is so enormous that I suspect it is a seminal form. The lower leaves are three to five-lobed, and the largest of the five lobes which I actually measured is 10 inches long by 5 inches wide. The entire leaf is (petiole included) 20 inches long, and from tip to tip of the two central lateral leaflets 16 inches, the colour now being brilliant reddish brown, shading to bright red-crimson. After making all due allowance for a healthy young plant in deep rich soil and a genial aspect, I still think leaves of this gigantic size are remarkable on the old Virginian Creeper.

There is an old enclosed garden at Straffan surrounded by walls and greenhouses, having flower borders and walks around a central grass plot with a dial. Here, amongst the other flowers, is an irregular row of great tufts of the old blue Aster bessarabicus covered with their great Daisy flowers, and the purple-blue flowers are again, in their turn, covered with a host of butterflies on sunny days; so that you almost think of the insect life of the tropics as you see them fluttering and dancing and basking in the sun. They are mostly the orange and black tortoise-shell variety, but amongst them, in more regal colouring, are great red admirals. Then at night, or rather in the gloaming, come the humming-bird hawk moths, brisk and alert, to rifle sweets from the long-tubed flowers of the white-flowered Tobacco or the Petunias, or from the Japan Honeysuckle on the walls.

I have seen Straffan under many phases, scathed by a bitter winter's frost, and as flowery and sweet under a genial summer's sunshine, but there is a rich and satisfying peace about the place during fruity autumn that sinks into one's heart too deep for mere words. But then the garden here is a long and well-tended growth of many years. There have been no sudden spurts, no fussy alterations or so-called improvements: there are even some parts allowed to remain, and now planted, for the sake of the memoried past rather than for their present-day use or beauty; and so we have here a garden rich in thought, rich in care, rich in subtle memories, as well as one merely sweet and fair with flowers. The privilege of seeing and enjoying its shady walks and flowery paths is freely granted to all who ask permission to see its many phases, and so it remains to us as one of the most interesting spots in the fertile and historical county of Kildare, which was beautiful and flowery (as history tells us) in the sixth century or earlier, when St. Brigida had her oratory under an Oak tree there, just as the monks in Yorkshire lived under the spreading Yew trees before the walls and roofs of Fountains Abbey arose around them.

F. W. Burbidge.

Societies and Exhibitions.

NATIONAL CHRYSANTHEMUM SOCIETY.

There was a large and important meeting of the floral committee of this society on Wednesday, October 23, at the Royal Aquarium, Westminster, Mr. T. Bevan presiding. The display of novelties was remarkably interesting, and some very fine varieties were submitted to the committee. Many of the flowers, however, were only conspicuous by their size, coarseness prevailing to a large extent, uncertainty in tone of colour being also noticeable in many instances. The committee, however, although the task was a heavy one, may be congratulated on having sorted out the grain from the chaff. The principal exhibitors on this occasion were Messrs. H. Cannell and Sons, Monsieur Ernest Calvat, Mr. Briscoe-Ironside, Mr. H. J. Jones, Mr. William Seward, Mr. J. H. Weeks, Mr. W. Wells, Mr. R. Owen, Mr. Godfrey, &c.

First-class certificates were awarded to the under-mentioned varieties:—

Chrysanthemum Edith Tabor.—A very fine Japanese of large size, having long drooping florets, curly at the tips; colour a very clear canary-yellow, with a faint shading of lemon. Exhibited by Mr. Notcutt.

Chrysanthemum Mrs. Chas. Blick.—A Japanese of great size and substance, with narrow grooved florets, curling at the tips. This is a pure white variety, and was staged by Mr. C. Blick.

Chrysanthemum John Seward.—An English seedling Japanese with great length of floret, a large, substantial flower. The florets are rather broad and of medium width. Colour a fine shade of deep canary-yellow, shaded lemon-yellow. Shown by Mr. Wm. Seward.

Chrysanthemum Dorothy Seward.—Another Japanese from the same source as the preceding, deep rich crimson, tinted carmine, reverse rich gold. From Mr. W. Seward.

Chrysanthemum Mrs. J. Shrimpton.—A large Japanese variety, having very long florets, twisted at the tips, and of a deep orange-yellow shade, streaked reddish crimson. Also from Mr Seward.

Chrysanthemum Lady Byron.—A cross between Mrs. Alpheus Hardy and Puritan. A big incurved Japanese with broad grooved florets. This is a handsome solid-looking flower and was sent by Mr. J. H. Weeks.

Chrysanthemum Piccinino (pompon).—A globular, well-formed little flower; colour rosy purple, reverse silvery. Raised and exhibited by Mr. H. Briscoe-Ironside.

Chrysanthemum Miss Annie Holden.—A neat-looking single variety, a yellow Mary Anderson. One of Messrs. H. Cannell and Sons' novelties.

Chrysanthemum Mutual Friend.—Another monster white Japanese with a delicate wax-like shade. It has very long curly florets, deeply grooved and a show flower in every way. From Mr. E. Beckett.

Chrysanthemum D. B. Crane.—An incurved of the old type, solid and substantial in build and with petals of good form; colour deep golden amber. Staged by Mr. H. J. Jones.

Chrysanthemum Ethel Addison.—A massive-looking incurved Japanese, with very broad florets; inside colour rich rosy amaranth, reverse silvery. Also from Mr. Jones.

Chrysanthemum Dorothy Gibson.—This is somewhat of a novelty, for it belongs to the reflexed section. It has regularly arranged flat florets, is above the usual size, and the colour is a rich deep golden yellow. Mr. R. Owen was the exhibitor.

Some other meritorious varieties were staged and mention may be made of the following: M. Benj. Giroud, a fine globular crimson Japanese; M. G. Montigny, a large Japanese, white, slightly tinted purple; M. Aug. Gaché, Japanese, white, suffused purple; Mme. A. de Galbert, large white Japanese with broad florets; Mrs. James Lewis, a very fine creamy white Japanese; M. George Biron, crimson and gold; Beauty of Teignmouth, Pride of Madford, an Australian novelty, S. B. Levick, Yellow Source d'Or, T. B. Haywood, &c.

THE UNITED HORTICULTURAL BENEFIT AND PROVIDENT SOCIETY.

The ninth anniversary dinner of this society was held, under the presidency of Mr. James H. Veitch, on Thursday, October 17, at the Cannon Street Hotel, E.C., when there was present a large number of friends and supporters, more, in fact, than for some years past. The success of the evening's meeting cannot but be ensured both by the lucid and in every other respect admirable address of the chairman, and by the great interest evinced throughout by those gentlemen who supported him. These included Messrs. A. Moss, H. J. Veitch, W. Nutting, P. Barr, G. Wythes, H. B. May, W. Y. Baker, H. Cutbush, H. Cannell, W. Iceton, and several others. In proposing the future and extended prosperity of the society Mr. James Veitch put before the meeting the chief features of this the best of all benefit societies for gardeners to join. He said:—

I do not purpose to-night to weary you with figures, or to enter fully into the benefits to which members of this society are entitled, as probably most of you are better acquainted with them than I am; but there are one or two points I would like to mention. First, and most important of these, is the welcome news that the committee have very recently found themselves in a position to raise the weekly allowance in case of sickness; thus those who contribute on the lower scale will in future, should need arise, receive weekly 12s. instead of 10s. 6d., and those on the higher scale 18s. instead of 16s. That the funds are sufficiently strong to permit of the weekly allowance in case of sickness being raised without raising the subscription there is no doubt—never has the society's condition been so satisfactory as at the present time—the invested funds in trustees' stocks now standing at £10,300 (though I am told their market value to-day is close on £11,000), showing an increase of £600 on the last balance-sheet. For the past three years the investments have increased at the rate of £1000 per annum. The cause of the funds permitting—as they undoubtedly do—of this great move is to a large extent due to the few cases of illness the healthiest of all callings provides, and to the fact that the majority of members are in permanent work, and do not come on the sick fund when ill for only a few days.

On the necessity for thrift in general, and the strong advisability of joining such a benefit and provident society as this when young, it would be easy to dwell, and much might be said on the necessity of thrift for the young men and foremen in the large gardens of this country, more especially as the occupation they have chosen has suffered so much, and is still suffering through recent years of depression and through the very large number who are continually entering its ranks. To such would I especially recommend the Benefit and Provident Society. The younger one joins, the sooner a large deposit is acquired, and the sooner one will find himself in the position of certain members at present, whose interest on their deposit is greater than the amount annually paid in subscriptions. Of its security and successful future they may feel assured; and even now, despite an average loss per annum of thirty members—due to death and to some who allow their payments to lapse—the new members average sixty, a nett gain of thirty new members per annum. Not sufficiently well known perhaps is one very important rule, viz., that, by which a member on attaining the age of seventy, when he ceases to participate in the benefits of the sick fund, may annually draw a portion of his balance (which at that age must necessarily be large), and at the same time be qualified for assistance from the benevolent fund, should he require it. It is true no member has as yet availed himself of this rule, the reason probably being the society has only just existed long enough for it to be possible.

Peculiar to this society, and undoubtedly of great value, is the convalescent fund, a fund which owes its existence to the foresight and generosity of Mr. Sherwood. This fund is purely a voluntary one, and it is at the disposal of the committee to send away for a time any member who may have been so prostrated by illness as to render a change imperative, but who may not have the wherewithal needful. To generous friends, and to those who are enjoying a larger share of the good things of this world than falls to all of us, I would venture to ask something more than a kindly thought for this fund when the United Horticultural Benefit and Provident Society next comes uppermost in their minds.

Most of us here, and certainly those interested in the three great bodies for doing good connected with our calling, are aware of the use this society must be to any member in case of illness, but to our visitors I would say, for a moderate monthly payment he receives a liberal weekly allowance during sickness; for no payment at all he may, if a fit subject in the opinion of the committee, participate in the convalescent fund. Should he in his old age be in want, the benevolent fund is at his service; and last, but not least, for in this point the society differs from others of its kind, he does not lose his deposit should his payments unfortunately lapse, and he, at the age of seventy, or in case of death any one he may have named, may withdraw the full sum with the interest placed to his credit up to the time he ceased subscribing, without any deductions whatsoever.

In a few words spoken later in the evening by the treasurer (Mr. James Hudson), allusion was made to the splendid progress made by the society since the inauguration of these anniversaries in 1887. Then when the society had attained its twenty-first year there were 177 members (benefit) on its books, now there are 581. Then the invested funds amounted to £3650, whilst now they stand at £10,300. There were in 1887 12 hon. members, now there are 50, this showing beyond any doubt the soundness of the society, than which no better argument in conjunction with the thoroughly practical speech of the chairman could be deduced. The surprising fact remains that gardeners do not join its ranks in still greater numbers, but there is one most pleasing feature—it is that of gardeners joining from all parts of the United Kingdom, thus showing that the society has their confidence. Mr. Sherwood again contributed £5 5s. to the convalescent fund, Messrs. Iceton and Mott both became life members of £10 10s. each, and Messrs. Arthur W. Sutton, Geo. Wythes, and H. J. Jones hon. members of 21s. each annually, whilst donations came from Mr. A. F. Barron and Mr. Geo. Monro, each of 21s. There was a most liberal display of flowers and plants from Messrs. Veitch and Sons, B. S. Williams and Son, H. Cannell and Sons, Laing and Sons, and others, a plentiful dessert adding to the features of the tables. The chairman announced that for the chairman of of next year he had secured the services of Mr. W. J. Nutting, of Messrs. Nutting and Sons, whose wide experience will stand him in good stead for that post.

Those desirous of obtaining rules, &c., can have the same forwarded on application to the secretary, Mr. W. Collins, 9, Martindale Road, Balham, S.W.

Royal Horticultural Society.—The next fruit and floral meeting of the Royal Horticultural Society will be held on Tuesday, October 29, in the Drill Hall, James Street, Victoria Street, Westminster. The committees will meet as usual at 12 o'clock, and at 3 p.m. a magic lantern lecture on Potatoes will be delivered by Mr. A. W. Sutton.

Notes of the Week.

The mildness of the seasor.—As showing the extraordinary mildness of the season, says the *Western Morning News* of October 21, a large dish of beautifully fine and ripe Strawberries was on Thursday last gathered by Miss Gladys Wade in the gardens at Wear Gifford Rectory, near Bideford.

Michaelmas Daisies in pots make pretty groups in the greenhouse at Kew, and doubtless there are many who might grow and enjoy them in this way. It is important to select suitable kinds. Those of slender and free-branched growth are most suitable, the varieties of A. cordifolius such as elegans and e. Diana, also A. turbinellus, being the best at Kew. A. ericoides, too, a most graceful and late-flowering sort, would well repay any extra attention of this kind, and last long in flower in a cool greenhouse.

Apple Bismarck.—This Apple has borne a heavy crop of large, handsome fruits on young trees this season, and bids fair to become a profitable variety. The trees themselves are exceedingly healthy and show no signs of canker. Some English Paradise stocks were grafted with Bismarck last April, and one, which produced three shoots of about 18 inches in length, was found to be carrying three fruits, the largest of which scaled 9 oz., while the remaining two weighed between them a trifle under 10 oz.—S. W. F.

Adiantum Farleyense.—This when well grown is perhaps the finest of all the Maiden-hair Ferns, its heavy, luxuriant fronds being none the less graceful although so massive. In a warm house at Howick we lately saw two grand specimens growing in baskets suspended from the roof. The largest plant was a magnificent piece. The basket it filled was of considerable size, and the diameter of the plant, if the drooping fronds were held up horizontally, would not be less than 6 feet.

Flowers from Winchmore Hill.—Mr. Perry sends us a gathering of good things still in flower with him. Chrysanthemum latifolium grandiflorum is a very fine form, but Coreopsis pubescens is not unlike a fine variety of C. lanceolata we have had. Inula ensifolia is a dwarf in a family of giants, only about 5 inches high, but making tufts of yellow bloom. Some good varieties of double Primroses we note with pleasure, also the purple Groundsel, a good late autumn flower, and fine Asters. W. Bowman still remains the best form of the purple New England Aster, and A. Bigelowi as sent is very good.

Tropæolum pentaphyllum.—A trio of graceful climbers that we like to see often are Tropæolum speciosum, T. tuberosum and the species above mentioned, which we noted flowering freely at Eslington Hall. It is perhaps the least showy of the three, but none the less charming, quite distinct from either of the others, its long, spurred flowers with their reflexed segments resembling those of some of the Fuchsias of the F. reflexa type. These plants are such light and slender growers, that even our choicest shrubs may furnish them the needful support and gain much in beauty by doing so.

Smilax aspera makes a fine screen of rich leafage and a beautiful mantle for the back wall of a glass house. There is a grand plant of it in a house at Chillingham Castle. This was raised

from seed brought home from the Riviera. From the base to the top of the high back wall it forms a mantle of deep green, and the shoots are terminated by long feathery panicles of tiny creamy white flowers. In southern gardens it is quite hardy, and might be seen more frequently, especially scrambling over a bold rock in a rock garden. It has heart-shaped leaves with curved spines along their edges.

Sunflower Bouquet d'Or.—This is a beautiful double-flowered variety of Helianthus multiflorus, which we noted among many good hardy flowers in the garden at Eslington Hall. It is quite distinct from the variety Soleil d'Or, and differs particularly from the ordinary form of H. multiflorus plenus in its well-defined outer ray of broad guard petals. The centre is very full and the colour of the entire flower a deep rich yellow. It flowers profusely and the blooms are borne on long stems well above the leaves. Both for effect in the garden and for cutting it deserves a place among the best autumn flowers.

Heliotropes.—Among the charming series sent to us for trial by Messrs. Bruant, of Poitiers, are Mme. René André and Madeleine Viand. Perhaps the most charming of all is Mme. René André, a soft deep purple, a distinct and beautiful kind which deserves to be grown in every garden where Heliotropes are cultivated. Mme. Barsby has flowers of a deep violet-blue colour, and Mme. Bruant in a similar rich shade is a superb kind. Cameleon and Picciola are two more handsome kinds of tall, robust growth, quite shrub-like, and covered with large trusses of reddish purple flowers.

Berberidopsis corallina.—A very fine plant of this is now in bloom at Cragside, Northumberland. It is grown under the same conditions as the Desfontainea noted in The Garden (p. 310), but is trained to the wall at the back, which it completely hides from top to bottom, whilst it has a branch-spread of rather more than 6 yards. Growing outwards from the wall and drooping gracefully are hundreds of slender shoots, each one terminated in a long raceme of many deep coral-red flowers and buds. Its beauty will last for a long time to come, as doubtless the protecting lights will soon be placed in position.

Morina longifolia deserves more attention from those who grow hardy flowers, as we rarely see it in gardens. We noted several handsome tufts of it in the borders at Cragside, where it does well, as some of the finest spikes had borne no less than twelve whorls of flowers. Such spikes last many weeks in flower, produce numberless blossoms, and are quaintly pretty, with the varying tints of the white woolly buds and expanded flowers, which are first blush-white, but develop colour till they become deep rose. The flowers are sweetly scented, and the leaves give off an agreeable scent when handled, but they are too spiny to permit of much handling.

Berberis chinensis or Thunbergi.—In the whole group of Barberries and Mahonias there is no kind so varied and delightful in its several aspects of seasonable beauty as this. It is a deciduous kind, and herein lie its varied charms. Its new leaves in spring are of the lightest shade of tender green, the flowers deep lemon-yellow, whilst it finishes up the season before its leaves fall with a perfect glow of orange and vermilion, quite one of the most beautiful shrubs for autumn colour. We saw a nice bush of it recently at Blagdon, Northumberland, but it is a shrub that should be frequently seen in gardens boldly massed or grouped, not in single isolated bushes.

The Sweet Verbena at Howick.—In the flower garden at Howick, Northumberland, several beds are filled with this plant that is always welcome in the garden. It is hardier than generally supposed, as although Howick derives some benefit from its nearness to the coast, 27° of frost were registered here last winter. The plan adopted by Mr. Inglis for the protection of the Sweet Verbena during winter is to thickly mulch the bed with leaves, which are filled in among the branches of the shrub to keep the leaves in place. The plants are not cut down till the protection is removed in spring. This fragrant plant is worth such attention to preserve and ensure its growth every year.

Stocks in northern gardens.—When looking through some of the best northern gardens, even as late as the middle of the present month, we saw fine Stocks in abundant bloom. At Howick a long border in the kitchen garden had a row of the East Lothian purple Stock, a good strain, deep and rich in colour and kept very true. Mr. Inglis saves his own seed, which gives 80 per cent. of perfectly double-flowered plants. A white Intermediate Stock was also very good and profuse in blossom. At Lambton, too, we noticed that Mr. Hunter grows Stocks extensively in the beds and borders, and here also they were flowering freely at the time of our visit.

Tree Carnations.—I herewith send you a few blooms of Miss Joliffe and La Neige Carnations. I cannot distinguish the slightest difference between the so-called Miss Joliffe Improved and the original stock. I do not disbud, as if terminal blooms are not wanted, the secondary ones come in later on. Were disbudding practised, the individual blooms would doubtless be larger.—J. Crawford, *Coddington Hall, Newark.*

*** A very beautiful gathering, the flowers of La Neige of the purest white and sweetly scented. As sent, we cannot see the slightest difference between Miss Joliffe and its so-called improved form.—Ed.

Flowers from Orleans.—Messrs. Barbier Brothers, Orleans, send us an interesting addition to the beautiful things of the present week in a variety of Polygonum, P. amplexicaule, that has long sprays of pure white blossoms. It is a pretty Knotweed and deserves to be grown with the best of the family, which is so valuable and good in colour, and so free even in places outside the garden proper. They also send Helenium autumnale superbum, which no doubt is a good autumn plant. The flowering qualities of these Heleniums are splendid, although we doubt if any of them show this fine quality in such a high degree as the little H. pumilum, which with us begins in summer and flowers right on.

Carnation Reginald Godfrey in autumn.—As promised, I herewith send you a few blooms of Carnations. To really appreciate these varieties you want to see them growing. I grow all the popular kinds, but of my strain I get a plant in two-thirds of the time and with five times the quantity of bloom. The pink is Reginald Godfrey; the nearest variety to it is Mrs. Leopold Rothschild (syn., Mlle. Thérèse Franco), but the latter is a much slower grower, gives but one-fifth of the flowers, which are more apt to burst and not so sweet-scented. I struck plants of Reginald Godfrey in March, planted them out in May, and had sheaves of good bloom in August. I took the plants up about six weeks ago and they are now coming into bloom again and will go right through the winter. The white is Miss Mary Godfrey.—W. J. Godfrey, *Exmouth.*

Autumn Snowdrops.—The first Snowdrop of autumn here is the Galanthus octobrensis, which opened its flowers on October 3, but it was very quickly succeeded by a couple of bulbs of the rare G. Reginæ Olgæ, which I owe to the generosity of Herr Max Leichtlin, of Baden-Baden, who has succeeded in again introducing it to our gardens. The last-named kind, like G. octobrensis, blooms on scapes 5 inches to 6 inches in height, that appear before the leaves. It has an elegant, drooping, long-petalled flower, and the markings on the inner segments are large and of a peculiar pale soft green tint. This variety was grown by the late Rev. Harpur-Crewe, but seems to have been lost after his death, so that we are all the more glad to welcome it back to the ranks of cultivated autumnal-flowering Snowdrops.—F. W. B.

Fruit farming.—Mr. George Barham, Danehurst, Hampstead, in a letter to the *Morning Post* concerning the carriage of fruit, says: "'Why do not farmers grow more fruit?' is a question often asked by our urban friends. Perhaps the following little incident may enlighten them, and at the same time be worth the notice of our new Minister of Agriculture, for unless something is done by those in authority to protect individual farmers from such cases of imposition, fruit must be left to rot on the ground and land continue to go out of cultivation. I have a small orchard at one of my Sussex farms, and seeing that I could only get 6d. a bushel offered for the Apples, which are of good quality, I ordered the bailiff to send a few bushels to my house in London. Four bushels have arrived, and the railway carriage paid to the carman on delivery was 6s., or just three times the value of the Apples. The sending station (Wadhurst) is forty miles from London, and the South-Eastern is the railway company which thus strangles and destroys the trade and agriculture of the district."

Laurustinus at Howth Junction.—For many years I have admired the clean, dense and healthy aspect of this shrub as grown on the exposed platform of the G.N.R. station at Howth Junction, whence the line diverges for Drogheda and Belfast. This year the flowers are earlier than usual and also much more profuse and beautiful; indeed, they remind one of the old exhibition plants of the past, the "elephants" of the Baines, Cole and Cypher epoch, since these Laurustinus bushes remind one of nothing so much as gigantic Ixora bushes covered with snow-white trusses of bloom instead of with scarlet ones. Howth Junction stands on a wind-swept neck of land with sea on both sides and is fully exposed to the N.W. gales, and yet Laurustinus and Portugal Laurels grow most luxuriantly and flower well also on the warm sandy soil. The only shelter is a slight belt of Larch or Pine on the windy side. Those interested in sea side flowering shrubs might do worse than include all the forms of the Laurustinus amongst their selection when planting.—F. W. B.

Outside Tomatoes in October.—To see Tomatoes ripening their fruits on open walls in October is a rare occurrence at any time in this country, the more so when the middle of the month is a thing of the past. Yet notwithstanding such is the fact, the foliage and growth very little worse than we see often in summer. I was quite surprised to see the above during a quiet walk the other day. The Tomatoes were growing against a brick wall about 6 feet high, and the plants which had been fruiting for some time were well to the top of the wall, carrying good trusses of large shapely fruits. No protection has been given them at any time; indeed, any such has scarcely been needed, while the full south aspect has evidently just suited the later set bunches of fruit. The exceptional heat of September as well as the comparative absence of rain, and, not least, the warm nights of which we have had a full share, have no doubt all played a part in the full and complete ripening of such good fruits in the middle of October.—E. J.

Cosmos sulphureus.—Referring to recent notes in The Garden on Cosmos sulphureus, if Mr. W. Thompson will examine his plants more closely he will perhaps discover that they are Bidens ferulæfolia, not Cosmos sulphureus. At least, this has been my experience with seeds said to be of C. sulphureus from New Zealand, evidently from the same source as those secured by Mr. Thompson, and to which his description fits. C. sulphureus (Car.) is in cultivation here, though rare, and a first-rate annual. Under cultivation it forms a sturdy, much-branched plant, 4 feet to 5 feet high. It flowers in a young state and through the season. The flowers have the blunt wide petals of C. bipinnatus and are equally large. They vary somewhat in colour, from light to deep orange-yellow. Cosmos vars. are favourite plants here, but mostly flower too late in the season to ensure a safe crop of bloom out of doors in this latitude. Some selections of C. bipinnatus have been made lately which flower earlier than the type and which will prove valu-

able. The yellow species noted above is also likely to be much appreciated for its early-flowering habit as well as its fine colour.—J. N. Gerard, *Elizabeth, N.J.*

Schizostylis coccinea.—Clumps of the above dotted about the herbaceous borders are now expanding their beautiful crimson flowers, which should severe frost keep off promise to be finer than usual this year. No more useful or easily grown plant than this can be found for conservatory decoration during the early winter months. Plants intended for this purpose are best prepared by breaking up the clumps into small pieces in April and planting them 15 inches apart in good soil upon a south border. An occasional watering until they are established and keeping free from weeds is all the attention they require throughout the summer. The plants should be lifted and potted early in October, or before sharp frosts are likely to occur, as I have found that plants grown in rich soil are more susceptible to injury from frost than are those that have stood for some years in the same place. Last year ours were not lifted on October 19, when a sharp frost occurred, which sadly crippled the flowers, many of which failed to open. Others scattered about the borders and under the shelter of fruit trees escaped and gave a quantity of spikes of bloom until the new year.—James Day, *Galloway House, Garliestown, N.B.*

Railway station flower gardens.—It is to be hoped that other railway companies will imitate, or even emulate, the action of the Midland directors, and institute prizes or other inducements for the making and keeping of useful and pretty gardens along their lines. After all it would be an economic policy, for in no other decorative way would a few pounds go so far and afford so much satisfaction to the railway officials themselves, as well as to the travelling public. Let us hope that the dreary and bare country stations will soon be a memory of the past, and that the careful planting of well-selected trees, shrubs and flowers may become the rule. Self-interest alone has often prompted porters and signalmen to till the waste land around their stations, and often with the most beneficial results to all concerned; but it still remains for the directors to offer more facilities.—F. W. Burbidge

—— The North-Eastern Railway Company also give prizes for the best floral display at stations on their lines, and we were pleased to see good culture of flowers in a very wild and wind-swept part of Northumberland along the branch line from Alnwick to Cornhill. This line has not been made many years, and the station buildings are particularly well adapted for growing flowers. Certainly flowers were never more welcome to us than here, some of the stations being perfect beauty spots set in a desolation of rock. The passenger shelters upon the platforms are not only roofed with glass, but have glass fronts as well—are in fact perfect conservatories if suitably adorned. The best station we saw along this branch was that at Wooperton, and although time did not permit of our alighting to examine it closely, we noted during the short stoppage of the train excellent tuberous Begonias, Fuchsias, Petunias, zonal Geraniums and fine pots of Lobelia flowering under glass, and a pretty compact flower garden had been made. In this, too, Begonias and Geraniums were prominent, as also was a broad and beautiful edging of the small-flowered Tagetes, gay with myriads of flowers.

The weather in West Herts.—A cold week, the temperature in shade on no day or night reaching the average. On the 22nd the highest temperature in shade was only 43°, while during the night preceding the 8th the exposed thermometer showed 7° of frost. Very nearly all the flowers of both Cactus and single Dahlias were destroyed by this frost, also most of the upper shoots. At 2 feet deep the temperature of the soil has now fallen to 51°, and at 1 foot deep to 47°, the latter reading being 3° below the October average. Rain fell on but two days, and to the total depth of less than half-an-inch. Throughout the 19th and 20th the air remained unusually calm, the average rate of movement being only about a mile an hour. During the last five days less than an hour's sunshine has been recorded.—E. M., *Berkhamsted.*

Obituary.

MR. C. F. BAUSE.

Through the death of Mr. C. F. Bause, which we much regret to announce as having taken place at the Moreland Nurseries, South Norwood, on the morning of Wednesday, the 23rd inst., after a long and very painful illness, horticulture is deprived of one of its most fervent and most active members. As a grower of plants in general Mr. Bause had few equals, while in the cultivation of stove plants in particular he occupied a most prominent position. It is, however, as a raiser of new plants that Mr. Bause's name is best known and most deservedly popular, for his success in raising new varieties of fine-foliaged plants is unequalled in this or any other country. Although of German extraction, Mr. Bause spent the best part of his life in England, where he came in 1863 and made his *début* with Mr. Herbst at Richmond, where he remained eighteen months. He then entered the service of the Royal Horticultural Society's gardens at Chiswick, where as a propagator and grower he, being a keen observer and exceptionally good and quick worker, soon attracted the attention of his superiors. In 1866 the horticultural world was startled by his production of new Coleuses, six of which were sold at Stevens's under the hammer for £250, and purchased by Messrs. Veitch. These were the forerunners of all the magnificent forms with which our parks in summer and our greenhouses in winter are now adorned. A little later on he succeeded in raising a race of Caladiums, which were distinct from those raised by Mons. Bleu, of Paris, inasmuch as the ground colour of most of the varieties was a bright yellow, on which the red markings formed a most pleasing contrast. Notwithstanding the many forms in commerce, such varieties as Prince of Wales, Princess of Wales, Princess Beatrice, Princess Teck, and the charming and highly coloured Fred. Bause are still some of the most distinct forms found in collections now-a-days. This was followed by the raising of several hybrid Dieffenbachias, the most distinct among them being D. Bausei.

Mr. Bause's abilities as a plant grower were appreciated by the late Mr. J. Veitch, and in 1869 he entered the Royal Exotic Nurseries, Chelsea, as a Fern grower, which department he left in 1871 to take charge of the new plant department, which was then very important, as that was the date of so many introductions of beautiful leaved Crotons, Dracænas, Anthuriums, &c. While he occupied that position he also raised several good and distinct forms of Poinsettias, from the intercrossing of the forms with white and scarlet bracts. In December, 1873, the deceased left the Chelsea Nurseries to take charge of Mr. Wills' establishment at Anerley, where he soon distinguished himself by the raising of many new and most beautiful forms of Dracænas, many of which have held their ground against all comers to this day. Many of our readers will remember the extraordinary fine show made by the late Mr. Wills during the Paris Exhibition in 1878 with plants either raised or grown by Mr. Bause. It was during his management of the Anerley Nurseries that the deceased raised the very distinct Adiantum Bausei; whereas A. rhodophyllum, A. deflexum, Nephrolepis Bausei, and Pteris Bausei were raised by him soon after he in 1884 started on his own account at the Moreland Nurseries, South Norwood. Two years ago he raised a new race of Caladiums, the stock of which was secured by Messrs. Veitch, who are now sending out such as Chelsea Gem, Duke and Duchess of York, &c., all beautiful and very distinct in colour and habit.

Mr. Bause, to whom all persons interested in fine-foliaged plants are more or less indebted, was of a very sympathetic nature, and made friends of all who came into contact with him. He leaves to mourn his loss a devoted wife, two daughters, and three sons, one of whom is now managing the business which he created and organised.

Death of Mr. Crispin.—All his gardening friends will have heard with regret of the death of this gentleman, after a long and most painful illness, at the comparatively early age of 55 years. For many years Mr. Crispin has been well known and respected throughout the west of England, where his unfailing good nature has made him a host of friends, and the great progress he made in business testifies to his capabilities in this respect. He was an ardent gardener, and his leisure hours were spent among his Orchids, Roses and other beautiful plants which he grew so well. Mr. Crispin was beloved by all who knew him, and by those who came into close contact with him and knew his genuine kindness of heart he will long be remembered.—H. R.

National testimonial to Mr. A. F. Barron.—The retirement of Mr. A. F. Barron from the important position of superintendent of the Royal Horticultural Society's gardens and exhibitions is regarded as a fitting occasion for presenting him with a testimonial. Known personally to a large number, and to a wider circle by reputation, his public work as superintendent of the time-honoured Chiswick Gardens is valued by all who have had the opportunity of judging. His management of the gardens for the long period of thirty-five years, and the success with which he has carried out various important trials and experiments in plant and fruit culture, have inspired confidence on every hand. His treatises on the Vine and the Apple are standard works of reference; his integrity and loyalty to the trust reposed in him, his amiability of disposition and readiness at all times to impart information have endeared him to the horticultural world generally; whilst his capacities for organising and carrying out to a successful issue numerous great exhibitions have secured for him general admiration. As the honorary secretary of the Royal Gardeners' Orphan Fund from its beginning in 1887, he has largely contributed to the success of that valuable institution. The committee therefore confidently appeal for subscriptions towards a fund for presenting Mr. Barron with some tangible mark of gratitude and esteem. In so doing the committee earnestly desire that all gardeners and lovers of their gardens shall have an opportunity, according to their means, of participating in a suitable acknowledgment of the life-long public services of one of the most worthy and eminent of British gardeners. The secretaries are Mr. W. Marshall, Auchinraith, Bexley, and Mr. B. Wynne, 1 Danes Inn, Strand, W.C.

Names of plants.—*T. E. W.*—A form of the common Ash with undivided leaves (Fraxinus excelsior monophylla).——*S. T. Spear.*—Hydrangea hortensis.——*Ellen E. Stevenson.*—Linaria purpurascens.——*E. Dashwood.*—Campanula turbinata.

Names of fruit.—*Mrs. G. C. Greendell.*—1, Williams' Bon Chrêtien; 2, Worcester Pearmain; 3, not recognised; 4, Emperor Alexander; 5, King of the Pippins; 6, Golden Spire.——*John Bram.*—1, Comte de Lamy; 2, rotten; 3 and 4, Flemish Beauty.——*Chas. Carter.*—Apple, Crofton Scarlet.——*R. Henderson.*—1, Gravenstein; 2, Yorkshire Greening.——*W. P. N.*—1, Pear Duchesse d'Angoulême; 2, Fondante d'Automne; 3, Beurré Superfin; 4, Marie Louise; 5, Beurré Diel; 6, Nouvelle Fulvie; 7, Catillac; 8 and 9, not recognised; 10, Forge. It would greatly assist us if those who send fruit for naming would state the district from whence they write.——*A. F. F.*—Pears, 1 and 9, Beurré Diel; 2 and 3, Brown Beurré; 4, not recognised; 5, Louise Bonne of Jersey; 6, Knight's Monarch; 7, Leon Leclerc de Laval; Marie Louise; 10, Souvenir du Congrès 11, Doyenné Boussoch.

No. 1250. SATURDAY November 2, 1895. Vol. XLVIII.

"This is an Art
Which does mend Nature; change it rather; but
THE ART ITSELF IS NATURE."—*Shakespeare.*

ORCHARD AND FRUIT GARDEN.

FLAVOUR IN PEARS.

THERE has been an extraordinary difference in the flavour of Pears this year, in some cases it being wretched, while in others it has been excellent. Pitmaston Duchess is the most remarkable instance on our light soil, and I think this proves that a hot season is requisite to get this showy Pear in its best condition. In ordinary years its size and appearance are its chief recommendations, the quality being decidedly second-rate, but this year it is delicious. Another fine looking variety is Beurré Clairgeau. As a rule the flavour is only third-rate; this season it is very good and far superior to any I have ever tasted previously. General Todtleben is very large, but usually only fit for stewing; the few fruits that have already ripened are nearly first-rate in flavour. Marie Louise is not so good as usual; the fruit is equally large and as well grown as in former years, but the flavour is most decidedly below the average. Later fruit from bush trees may possibly possess the full and exquisite flavour so much esteemed in this variety. Brockworth Park has been the most insipid Pear I have tasted this year; the fruits contained plenty of juice, with less flavour than is present in a Turnip. Thompson's is also disappointing this season. The crop and size of fruit have been all that could be desired; not so the flavour, as that peculiar and pleasant taste characteristic of this variety is almost entirely absent. Durondeau is splendid in quality, in fact it may be termed exquisite, and up to date (Oct. 21) is the best flavoured Pear I have tasted. This variety is worth planting more freely, as it is a hardy and prolific sort, of handsome appearance and rich quality in all seasons. Beurré Hardy is another sterling variety; the trees nearly always bear well, the fruit is large and attractive and of very good flavour. This year it is extra rich and melting, and in my estimation is one of the most reliable varieties, especially in bush or pyramid form. Beurré Superfin has been very fine and ran Durondeau very closely in flavour. This excellent variety is generally grown against a wall, but in favourable Pear-growing districts it succeeds admirably in bush form, cropping freely, and affording a succession to the fruit from wall trees. Clapp's Favourite was of extraordinary dimensions this year, with a lovely colour on the sunny side, but the flavour was of the usual indifferent character, and a long way behind that of Souvenir du Congrès, which ripened at the same time. The latter variety surpasses its parent, Williams' Bon Chrétien, on our soil, as it crops more heavily and is of better flavour. Beurré Diel is specially fine this year on wall trees and the fruit of rich flavour; on bush trees it has not been quite so satisfactory. Beurré d'Amanlis has been decidedly poor in all respects this season, much of the fruit being infested with dark spots on the skin, and a large proportion decayed in the centre while hanging on the trees. Comte de Lamy is always excellent, this season being no exception to the rule. This variety is not so much grown as its merits warrant. No doubt its small size is an objection with many, but for the table it is large enough, and if pruned on the extension system is a very prolific sort. Fondante d'Automne is another delicious Pear, rarely failing to crop well; this year the fruit has been very attractive and rich in flavour. Marie Louise d'Uccle is never of first-rate flavour with me, but this year it is worse than ever; still it is a good market variety, as the fruit is freely produced, of good size, and nice shape. Magnate promises to be in demand in the future, as the fruit is large, beautiful in appearance, and of a rich and pleasant flavour. The quantity and quality of the produce from small bush trees have pleased me this year, and I should think this variety will prove valuable for market growers. Suffolk Thorn is now in use; the medium-sized fruits are distinct and rich in quality and scarcely influenced by seasons, both cordon and bush trees usually bearing moderate to heavy crops. Flemish Beauty is very poor in flavour this year, and the same applies to Doyenné Boussoch, neither being so good as last year. For a number of years I have made notes on the flavour of Pears, and it is most interesting to observe how they vary with the seasons, showing how greatly they are influenced thereby. W. G. C.

Pear Uvedale's St. Germain.—This stewing Pear is not considered suitable by some growers to grow as a bush tree, as they contend that it is a shy bearer in that form. With me it is most prolific as a bush, quite young trees producing excellent crops of large fruit. One tree planted three years ago had 46½ lbs. of fine large Pears picked from it last week. As a standard it succeeds splendidly on deep, fertile soil. At Rotherwas, near Hereford, Mr. McCabe pointed out a big tree loaded with immense fruits, this gardener further stating it had carried similar crops for many years.—R. H.

Apple Emperor Alexander.—At a recent fruit show this variety was staged in a collection containing a sort named Grand Duke Constantine, the exhibitor no doubt believing the two varieties named to be distinct. After growing them side by side I cannot detect the least difference in growth, foliage, or fruit, and I believe them to be identical. Looking through a fruit catalogue received a few days ago, I noticed that Emperor Alexander had Constantine bracketed with it. Many interested people visit our leading fruit shows to take notes of the names of fruit that may to them appear the best, and many of them are not sufficiently expert to see that imposing dishes are exhibited under two or more names. Then trees are ordered, and in a few years they find they have the same Apple under different names, and naturally are somewhat annoyed.—W.

Apple Egremont Russet.—Very few of the Russets will equal this variety for general excellence both on the English Paradise and free stocks. It comes into bearing rapidly and produces moderate crops of fruit, fit for dessert at any time from the end of October to the end of March. The habit of growth is specially suitable for small gardens, as it forms an upright, close growing tree, that requires some of the weaker and inner shoots to be removed entirely to allow the wood ample light to perfect the fruit buds so freely formed.—R. H.

Peaches outdoors.—I am pleased to see some of our younger gardeners commenting on the culture of Peaches, Nectarines, and Apricots on open walls, and am very pleased to hear some of them succeed. I commenced the care of trees on open walls in the autumn of 1837, and had a fair experience of the cold in January, 1838. I started in the gardens of Beckett Park and Coleshill, Berks, where good fruit was grown on the open walls in those days. In fine seasons we used to get good crops of Figs on the walls, there being very little glass. Thirty years ago the great rage for summer bedding started, and of course the flower garden had to be kept nice whatever else was neglected. This was quite fatal to growing fruit on open walls, as frequently there was no extra assistance to get through a great amount of extra work, and the consequence was Peach and other trees were not disbudded at the proper time, and they were left to be cleansed by the summer showers instead of the garden engine. The gross growth was allowed to overcrowd the proper bearing wood, and the nailing or tying was left much too late. Since leaving Berks I have lived in Devon, Kent, Surrey, and the neighbourhood of London, but never found any difficulty in getting good crops of stone fruit when I had drained the borders and given the trees good loam with a little lime rubbish to grow in. Prune and nail, disbud in proper time, keep clean, and water when necessary, and you will be well repaid.—R. BUTLER.

Apple Ribston Pippin.—The best of all possible answers to those who assert that the Ribston Pippin is dying out was the grand exhibit at the recent Crystal Palace show, where over one hundred dishes of this fine Apple were shown in splendid form, probably the finest lot ever brought together. Amongst the whole of the dishes not an inferior fruit was shown, and the first prize lot was a revelation to many growers. The hot summer is probably responsible for the extra quality, and has evidently suited the Ribston better than a cooler and less sunny season would do. I find this Apple at least as constant in bearing as most other varieties, and more saleable than any other, with the exception of Cox's Orange Pippin. The importance of allowing free growth, as pointed out by "S. H. B." (p. 274), must not be forgotten by those who wish to make sure of an annual crop of Ribston. Thinly branched bush trees with lateral growth left intact or only very lightly thinned may be expected to fruit freely and to carry fruits that will keep later in good condition than those grown on severely restricted trees.—J. C. TALLACK.

Outdoor Grapes in Surrey.—At Downside, Leatherhead, are to be seen really excellent crops of both black and white Grapes against a low wall with a southern aspect. The wall is but a yard high—in fact, it is the wall supporting the front of the conservatory. The black variety, Mr. Mease thinks, is Black Cluster, the white, Foster's Seedling. Bunches of the latter weigh fully three pounds each and the berries are very good. The black variety has capitally finished berries. The same treatment as is accorded to indoor Vines as regards the manipulation of the shoots is practised, close spur pruning being the rule, and with excellent results too.—E. M.

FRUIT ROOMS.

FRUIT rooms are often built in any convenient spot regardless as to whether the position is a suitable one, and their general character is frequently quite the opposite of what is required for keeping Apples and Pears over the longest possible period. In the first place, fruit rooms should never have a south aspect, nor yet be lofty. The reason for this is apparent. When facing the sun, that agent, especially during October and November, runs up the temperature to far too great a degree, the fruit ripens speedily, and is soon past and gone. Lofty structures become too dry and arid, and thus also hasten premature ripening and speedy decay. The best fruit room I know of is constructed behind a high bank of earth and facing due north. It is entered by descending several steps, and is covered by a heavy thatched roof, ample ventilation being provided. In the south of England I have known many varieties both of Apples and Pears to keep sound and good for several weeks after they had disappeared from ill-constructed fruit rooms in midland and northern districts, and this in spite of the fact that the southern fruit ripened a fortnight sooner. A cool even temperature is what is wanted to preserve fruit, and to enable late sorts of Apples to retain their weight. So long as actual freezing does not occur the fruit will take no harm in winter, and it is far better to cover

slightly with a little dry fern or hay in extra sharp weather than to apply fire heat. At the same time every fruit room should be furnished with a stove for use in such winters as that of 1894. I do not approve of the old way of laying the fruit upon cushions of hay or similar moisture-retaining material. I prefer to lay sheets of coarse brown paper over the shelves when storing soft-fleshed, tender-skinned sorts, but firm, thick-skinned, long-keeping Apples do very well simply laid not too thickly on the bare shelves, which ought to be of a latticed character, in order that a current of air may pass through the fruit When examining the fruit and removing any decayed a candle should be used rather than open the shutters for any length of time, oft-repeated light having a tendency to hasten on the fruit and also to reduce its weight. Where there is plenty of space, the more thinly Apples are stored the better, as it goes without saying that the greater the pressure the greater the liability to rot, and by thin storage faulty fruit is more easily detected, and the labour of sorting reduced. Apples will keep well in cellars, provided they have no windows facing south into which the sun can shine. J. C.

MILDEW ON VINES.

I have been very much troubled with mildew in my vinery, so much so that I have lost all my Grapes the last two years. Can you advise me how to get rid of it, and what means I had better take to save my crop in the future? I have given the house all the air I could the last two years, but that seems to have had no effect either in stopping it or even mitigating its effects.—Thos. R. White.

*** Once mildew (Oidium Tuckeri) is well established in a vinery it is very difficult indeed to get rid of it. In some instances the Vines have been so weakened by its repeated attacks, that the best way out of the difficulty has been to completely clear out rods, Vine border, and anything else that is likely to form a resting-place for the spores of this much-to-be-dreaded fungus. In addition to this the glass was cleaned, the woodwork painted, and the walls generally thoroughly coated with hot lime-water—altogether a drastic, yet most effective remedy. The next best plan, and which if successful, as it most probably will be if carried out in a thorough manner, does not entail the loss of a single crop, is to prune the Vines after they have been duly rested and then commence the work of cleansing. Remove all loose bark from the Vine rods and all rubbish from the house generally, and then well brush into the rods a composition made as follows: Place 1½ lbs. of flowers of sulphur and 2 oz. of lime in a saucepan, with 6 quarts of water. Boil down to 3 quarts, and then strain through muslin. One wineglassful of this is sufficient to mix with 4 gallons of water, and this ought to be strong enough to destroy mildew without injury to plant life. Scrub the rods thoroughly, well brushing the mixture into all the crevices. A repetition of this treatment a few days later on—in fact, three or four times during the winter—will be found far more effective than dressing with insecticides thickened with clay. Also clean the glass and scrub the woodwork with hot water, in every gallon of which a lump of soda and soft soap about the size of a bantam's egg have been dissolved, following this up with at least one good coat of paint. The mildew composition might be used for cleansing the woodwork of mildew germs, but stains badly. Lime-wash the walls, not making the dressing too thick, or otherwise the crevices will not be reached. If the border is an inside one, carefully fork away and wheel out every particle of surface soil to the extent of well baring the roots, give a soaking of liquid manure if dry and poor, and then top-dress with a fairly rich compost. This would answer well: to every ten barrowloads of brown fibrous loam add two barrowloads of fresh horse manure, two barrowloads of lime rubbish, two barrowloads of "burn-bake," half hundredweight of bone-meal and half bushel of soot; apply liberally. A poor, dry root-run favours the spread of mildew, so also does reckless ventilation, more especially when this takes the form of opening the front lights wide during the prevalence of bright sunshine and an easterly wind in May. Sulphur fumes will destroy mildew germs, but must be applied when there is no leaf growth. This might be included in T. R. White's attempts at getting rid of the mildew, which must be very determined if he is to succeed: Mix flowers of sulphur with milk and apply this in the form of a paint to the hot-water pipes. Shut up the house and make the pipes hot enough to generate sulphur fumes strong enough to drive a man out of the house. This would kill any growing Vines or plants, but would not injure trees or Vines at rest. Next spring, a close look-out for any signs of mildew should be kept, and directly detected (there is almost certain to be a little of it) sponge the affected parts with the mildew composition diluted as before advised.—W. I.

The Crystal Palace fruit show.—The R.H.S. authorities have met with severe criticism over the arrangements of this show. It should be understood that the criticism applies only to the competitive portion of the show, all that part devoted to honorary exhibits arranged in precisely the same way answering admirably. But I am informed that the arrangement of the tables was that of the Crystal Palace management, and the R.H.S. officials had to make the best of it. That it did lead to many unfortunate mistakes there can be no doubt, and it is most obvious that another year a far more desirable table arrangement must be made. With regard to the schedule, I entirely agree with the criticisms recently expressed. It is far too stereotyped; we want classes for green or late fruits especially, and rather less desire to see or encouragement given to mere show fruits. We want classes for flavour also, both in Apples and Pears, the latter especially. We want to have our dessert Apples grouped also, having classes for Pippins, Russets, Pearmains, &c.; then a class for others not so designated, and that would enable Court Pendu Plat, Margil and others of our most delicious Apples to be shown. We might also have classes for colour, as so much stress seems to be laid on that feature. The single dish classes are very monotonous and uninteresting. I hope we shall see a very different schedule next year.—A. D.

—— I am pleased to see the remarks in The Garden (pp. 302 and 303) on the arrangement and judging at the above. I had no idea that there could be such haphazard management by the leading society, who recently was formulating a new judging scheme, and under their guidance better things should have been expected. Who is to blame? Are there too many judges, and are they tried men in their several departments? Are the officials responsible for the staging, or is it the council? Strange to say, the fruit committee was not consulted as to the schedule, as it was not brought before them, so I hope Mr. Prinsep will exonerate them. Perhaps the society goes outside to get its schedule framed in the same way it recently got a committee together for a special purpose. It is not necessary to do so.—F.R.H.S.

Manuring Gooseberry trees.—How often in large and small gardens does one see Gooseberries totally neglected as regards manure. They are allowed to grow in one place for many years, and they produce weak wood with abundance of sucker growth. These trees in light sandy soils suffered badly this season from red spider. Now is a good time to apply a good mulching of rotten manure, as the trees will soon absorb the food at this season of the year. Impoverished trees will well repay removal to new quarters. It is surprising how well old or large trees bear removal—they take a new lease of life. If given fresh soil and well mulched afterwards, they start into growth next year with more vigour, and there is less trouble another season with insect pests. In wet, low-lying situations the old trees get covered with Lichen. A good dusting with lime before manuring will check the growth of the Lichen. A little attention to the trees now, when time can be spared, will be well repaid by the crop later on.—S. H. B.

Peaches in town gardens.—In The Garden for October 19 (p. 303) "E. M." alludes to the satisfactory crops of Peaches he had seen in town gardens. I can support his statement, for I have frequently seen perfectly healthy trees carrying good crops of fruit in such gardens. The greatest objection I have seen in the fruit produced in them is that it is generally of a bad colour, owing to the smut and smoke. I used to grow both Peaches and Nectarines well at Dingwall House, Croydon, thirty years ago, but the amount of syringing required to keep the foliage and fruit free from smut was enormous; the flavour, too, was very good. I know, too, that in such gardens the trees require a large quantity of water at the roots, even in ordinary seasons. The greatest hindrance to getting a crop of fruit is frost when the trees are in bloom. In such sheltered gardens as we find in towns the blossoms open quite a fortnight earlier than those in the country, and if the bloom is not well protected the crop is lost. In a mild time I have seen all the blossoms on unprotected trees destroyed in the middle of February. Peach growing in town gardens will not be always successful, but a painstaking cultivator may in fairly good seasons safely reckon on getting a crop of fruit.—J. C. Clarke, *Taunton.*

Apples and canker.—In the early part of the year I wrote that I had noticed cases where canker had attacked Apples on the Paradise stock while those on the Crab were free from the disease. This statement was received with incredulity by a correspondent, who gave reasons why the Paradise stock would enjoy greater immunity from canker than would the Crab. While not professing to be equally experienced, or to treat them otherwise than as possible exceptions that might prove the rule, I gave two instances in which the reverse was the case. I have lately visited a garden where there are several large bush trees of Blenheim Orange. Some are on the Paradise stock and some on the Crab. Those on the Crab are in good health; those on the Paradise badly cankered. The garden alluded to is on a hillside with a slope to the south, and the soil is a deep heavy loam. I would not say that canker is generally more prevalent on the Paradise than on the Crab stock; indeed, I believe the reverse to be the case, but there are instances when this is so.—S. W. F.

THE COMMON SWEETWATER GRAPE FOR EARLY FORCING.

I have not the least doubt I shall be thought lamentably behind the times in recommending this Grape for early forcing. Those who know the merits of the Sweetwater will bear me out when I say it is far superior to Foster's Seedling. The berries of the Sweetwater may not be so fleshy, but the juice is delightfully sweet and refreshing, and nine people out of ten who regard flavour as the primary point in a Grape would prefer it. Gardeners are, I think, in a great measure to blame for this, as the much larger Foster's Seedling has been allowed to push it on one side. This is, in fact, clearly a case where size of bunch and berry has been placed before superior flavour, and I am quite sure if gardeners would once more introduce it into their early vineries they would not regret it. Early forcers of Grapes are well aware that, so far as appearance of the berries goes, Foster's Seedling is ready for table a fortnight in advance of the Black Hamburgh when grown in the same house, but they may not know that the common Sweetwater can be had perfectly ripe and sweet a fortnight before Foster's under the same conditions. Thus two points are gained in favour of the smaller Grape; the former is a gain in time, and the second (the more important of the two), a

crop is secured that will give pleasure to those who may have to eat it. The common Sweetwater is easily forced, sets its berries with the greatest freedom even in the dark, dull weather of mid-winter, and bears regular crops. Thirty-five years ago when I was at Kersney Abbey I had no difficulty whatever in getting the common Sweetwater ripe early in April, although the heating medium was only a flue and the roots in an outside border. At that early date the bunches were of a respectable size. But better than all was the report of my employer that the flavour was excellent. I am not asking anyone to root out established Vines to make room for this one until he has proved whether I am right or wrong about the merits of the Sweetwater, as there are plenty of gardeners who have the convenience to grow a few plants in pots, and so prove the matter for themselves.

Taunton. J. C. Clarke.

OUTDOOR GRAPES.

The discussion on the culture and management of Grape Vines in the open air is likely to prove as interesting and useful as that on outdoor Figs. In my opinion the decline and death of a great proportion of Vines in the open soon after the seasons changed for the worse were to a great extent due to the injudicious manner in which the Vines were pruned, trained and thinned in summer. Many of the most luxuriant and productive Vines belonged to those who had no definite knowledge of their requirements, the only attention accorded being a rough-and-ready sort of pruning in spring and little or no thinning out and shortening back of lateral growth in summer. Under these conditions the Vines fruited and even ripened fair crops of average-sized bunches, but as soon as dull summers and wet autumns set in, the wood of these Vines, being pithy and unripe, soon succumbed to frost of average severity. I know of Vines here and there which, being in better hands, have been regularly pruned and stopped much as indoor Vines are, and they are still living, and, although old, are fairly vigorous and productive. Essex was famous for Vine-clad walls and cottage roofs twenty years ago, and I well remember a very profitable one which grew on a kind of rough trellis about a foot from the roof of a labourer's dwelling, the Vine also covering the whole of the front thereof. The variety was the common white Sweetwater, of which Mr. Iggulden speaks, and the profits from the sale of the Grapes each year went far towards paying the rent both of house and garden. In the gardens of Lord Petre in the same county, extra good crops were borne on outdoor Vines year after year. The Vines occupied the south side of the lofty bothy and seed and fruit rooms, one being a Black Hamburgh and the other a Sweetwater. In good seasons, with a maximum amount of sunshine, I have known the best bunches enclosed by muslin bags to protect from wasps and flies, and used for dessert. The main stems of these Vines were taken some little distance up the wall, horizontal rods being then trained right and left the whole length of the building, upright rods being taken from those at every 4 feet, the close spur system of pruning being practised. The border was narrow and shallow, and the roots had gone beyond it and permeated a large space of gravel roadway opposite. The narrow border was mulched and fed several times with farmyard liquid. The wood the Vines made in such a medium was only moderately thick, and in autumn brown and hard, and quite capable of passing through a sharp winter uninjured. Were I planting outdoor Vines I would follow the above lines exactly. I do not consider that the system of running up new rods yearly and cutting out the old is as safe as adhering to the old rods and close spur-pruning, thorough ripeness being less certain with the young rods in a variable climate like ours. Provided the improvement in our summers and autumns continues, I think it only needs time for open-air Grape growing to again become general. A variety called Gamin Noir, which has small black berries, and is extensively grown in the French wine districts, is now highly recommended for outdoor cultivation. Gamin Noir is also one of the principal varieties grown in the Marquis of Bute's vineyard at Cardiff, wine from the vintage of 1881 having recently been sold by auction at £5 15s. per dozen.

J. C.

SHORT NOTES.—FRUIT.

Pear Comte de Lamy.—Mention is made by "J. C." (p. 303) of this Pear. I, too, have much to say in its favour, as it is one of the few Pears that succeed here in the open. As a freely-grown pyramid it seldom fails to give a full crop of fruit, generally of good size and excellent flavour.—E. M., Hants.

Pear Duchesse d'Angouleme.—I gathered to-day (October 19) from a short cordon-trained tree growing against a south wall one fruit of this Pear, which turned the scales at 2 lbs. 2½ oz. In circumference it measured 15½ inches, and from the stalk end to the eye it measured 17½ inches. To me this seems an unusually large fruit for the variety.—E. M.

App'e Ribston Pippin.—The fact of this Apple being so largely represented at the late fruit show at the Crystal Palace hardly proves that it is more popular. I think the real reason for such a large number of dishes is the fact of the present year's crop of all varieties being so much in excess of that of previous seasons. My opinion is that the Ribston is less popular than it was. Trees are not planted so largely as they were some few years since.—E.

CHRYSANTHEMUMS.

NEW VARIETIES.

Judging from the appearance of several new kinds fast developing, this season is likely to be remarkable for the large number of new, distinct and desirable sorts. The Japanese varieties will largely preponderate of course, and rightly so, as they are by far the most appreciated for any purpose. The following I have noted as being worthy of consideration by cultivators in the future. In describing new Chrysanthemums I am much guided by my own ideas of the colour of each as found in the blooms before me rather than from descriptions obtained from nurserymen. [illegible] Boo[illegible] promis[illegible] growing [illegible] under [illegible] improved Miss Anna Hawkshaw, a kind with which it resembles. The blooms are massive, nearly 8 inches in diameter; the florets incurve loosely, giving it much character, white, with just a tinge of lilac or blush in the later-formed blooms. I should strongly advise growers of large blooms to make a note of this. Zealandia, as its name implies, was raised in New Zealand; it belongs to the class known as Japanese incurved, the florets broad, making a massive flower. The colour, silvery pink, is pleasing. When grown early it has but just a shade of pink in the centre. It grows 6 feet high. W. G. Newitt is another American-raised variety I noted last year favourably. This year it promises to be equally fine. The long pure white florets droop most gracefully and informally. The foliage is massive, and contrasts well with the bloom. It is one of the best of white-flowered Japanese Chrysanthemums. The treatment required to obtain the finest blooms is to pinch the plants early in April in the same way as Mrs. Falconer Jameson, and take up from this check three stems, allowing each to carry one bloom. Plants 3 feet high, surmounted with three charming flowers, are then obtained. Hairy Wonder appears to be fulfilling the opinion formed of it last season as to its being the best in the coloured hirsute section. Mrs. J. George Ils was sent out from America with a great flourish, and was regarded as being a great gain upon existing varieties. At present I am unable to note any distinction whatever in growth or bloom from Florence Davis. Mrs. W. H. Lees is behaving in a desirable manner this season, and I shall expect to see this flower exhibited in perfect form on many occasions. Nothing could be more promising than the growth of the plants. Abbe Mendenhall is an American-raised variety of dwarf habit, capital blooms being produced on plants but 3 feet high. The long, narrow petals incurve slightly at the point; the centre is deep yellow, but with age the petals change to primrose—a full massive bloom. Lily Love was sent out in 1894 and evidently possesses much character. I do not know any other variety of the same form. The tubular petals are long and narrow, pure white when fully expanded, but green in the centre while developing; height 3 feet. A. H. Fewkes produces full-sized blooms upon plants but 2 feet 6 inches high. It is an incurved Japanese. The plants are clothed with extra large deep green leaves; a most promising variety. Mrs. J. R. Taylor is supposed to be of the Golden Dragon type of bloom, with long, curly petals. Early blooms do not show it in this character at all. At present it is a massive flower, having rather short incurving petals, many being split and forked at the point. In colour it is a dull white with a distinct primrose centre, which will no doubt pass away with age. It grows 5 feet high, having extra long peduncles. L'Isère is developing blooms in a satisfactory manner; the long, somewhat drooping florets are massive. Mrs. C. E. Shea is giving most promising blooms from plants but 4 feet high. It appears to warrant the high opinion formed of it last year. W. Fyfe, but 3 feet high, is carrying plump, well-formed buds; the same may be said of William Bolia. The former is a representation of the once favourite Belle Paule, the latter a rich crimson, with silvery reverse. As a rule the red and crimson-coloured varieties have a golden reverse; in W. Fyfe, therefore, we may expect a departure. Mme. Adolph Chatin and Mme. Ad. Moulin both promise well. The former is a massive incurved flower of the purest white; the latter has much longer petals, which incurve at the point, cream centre, fading with age.

E. Molyneux.

Chrysanthemum M. Aug. de Lacvivier.—This variety has been in the hands of English cultivators for the past two seasons, but as yet it [illegible] a very desirable sort.—H.

——This is a Japanese incurved with broad grooved florets, the inside a warm terra-cotta, the reverse rich golden rose. This Japanese Chrysanthemum is most disappointing. The blossoms cover much space, but they are very "thin." Early flowers have quilled or fluted florets. The colour is rose, shaded gold.

Chrysanthemum Louise.—This variety is first rate for producing blooms in October. It is in fact one of the noblest of all Chrysanthemums, in colour a lovely blush shade. It is a Japanese variety of loosely incurving formation, the flowers on disbudded plants being 5 inches to 6 inches across and of similar depth; the florets broad, wax-like, and rich. Not the least of its merits is the dwarf growth and abundant foliage. Plants in 6-inch pots make capital specimens, such as would be useful for the conservatory.—H.

Chrysanthemum M. Chas. Molin.—Among the most promising of last year's novelties from France was the above-named, and the blooms of this season already bear out its excellent qualities. The colour is bronzy yellow, the latter shade most

characteristic of the centre portion of the flower. In form the flower is drooping, large, and very double. The plant is of medium height with distinct and fine foliage.—H.

—— This belongs to the reflexed type of Japanese. The florets are flat, broad, and of good substance; the blooms well built and of full size. The colour varies according to the "taking" of the buds. From the early-formed buds the centre of the flower will be golden yellow, the base heavily flushed with crimson-bronze. Later formed blooms will have a mixture of yellow, crimson, and bronze. Altogether it is one of the best varieties in the Japanese section of last year's introduction.

Chrysanthemums at Ambleside, Wimbledon.—Well-grown collections of Chrysanthemums are not rare now-a-days, but it is not often one meets with such an exceptionally nice lot as may be seen at the residence of Mrs. Barclay. The leaves are free from disease of any kind, and have a shiny deep green hue which denotes the best possible health. These hang to the pot's rim in most instances, and are large and firm, but not coarse. The stems are not particularly stout, but hard and well ripened. Another thing noticeable is that a badly-formed flower-bud cannot be found; each kind in its particular way is swelling in the most kindly manner. The plants are grown to present bold groups in the greenhouses, but if any go to the exhibitions I shall be surprised if they do not give a good account of themselves. The collection is rich in new kinds, as well as the best of the older sorts. Phœbus (chrome-yellow) is grand and thought much of. President Armand, for which Mr. French gained a certificate lately, carries finely-incurved blooms of an old gold colour, with an inside crimson shade of peculiar richness. Souvenir de Petite Amie is a good white flower, and the growth very dwarf. Mlle. Thérèse Rey (white), Eda Prass (blush), M. Pankoucke (yellow) and William Tricker (rose) are a few of the most forward, and are very fine. The mode of growing late-struck cuttings in small pots is followed extensively here, the plants being excellent. They are each from 1 foot to 2 feet high and useful for edging groups.—Visitor.

Dwarf Chrysanthemums.—Will some reader kindly give me the names of twenty-four new Japanese Chrysanthemums, in various colours for good-sized blooms? The height of the plants must not exceed 4 feet 6 inches, or 5 feet.—Arthur Nottingham.

*** The following kinds will not grow beyond the height desired, that is, provided ample room be given the plants in the summer-time and crown buds be selected. Most of the sorts may be expected to produce about half a dozen good-sized blooms to a plant. Boule d'Or (new), buff; Cecil Wray, yellow; Commandant Blusset, amaranth-crimson; Guirlande, shaded white; Hairy Wonder, buff-yellow; Louise, blush-white; Mephisto, red and yellow; Mrs. E. S. Trafford, bronze-rose; Mme. Ad. Chatin, white; Mme. Ad. Moulin, white; M. Gruyer, pink; M. Ch. Molin, bronze-yellow; M. Pankoucke, yellow; M. Georges Biron, crimson; President Armand, crimson and old gold; Niveum, white; Phœbus, yellow; Pallanza, yellow; Richard Dean, crimson; Souvenir de Petite Amie, white; Thos. Wilkins, yellow; Thos. Dennis, red; Wilfrid Marshall, yellow; and Wm. Bolia, amaranth-crimson, will, we think, answer your purpose.—Ed.

CHRYSANTHEMUMS IN OCTOBER.

The recent exhibition at the Aquarium was not over-rich in varieties which are at their best in October, but in too many instances they were merely the ordinary November kinds forced on by selecting early buds and thus presenting specimens in many cases entirely out of character. This is a pity, as growers should be alive to the fact that a selection of good sorts may be obtained without such manipulation, which I venture to say would show to greater advantage than most of the blooms at the time in question. That the late show made a splendid display collectively I admit, but I have seen better Chrysanthemum flowers during the month of October. There was an especial want of colour; light shades predominated everywhere. The variety E. Molyneux was absent, at least I did not see a good bloom. Wm. Holmes is despised because a trifle small, but I have seen fine showy blooms of this old sort at previous shows in October which would have materially assisted in giving colour at the late one. The rich yellow Sunflower was missing, nor was Avalanche in anything like good form. Mlle. Thérèse Rey, again, was sparsely shown, and I did not note a flower of Mlle. Lacroix. Now this is a true October variety, and is charming when well grown. Elaine, the purest of whites, is better than many of the newer varieties, and is at its best during the month. Louise was very fine, and is naturally early. Hamlet is a good early kind of a taking cerise shade, which is all but forgotten. Wm. Tricker is also early and fine. Mme. Edouard Rey makes a handsome show flower in October. Blooms of Thomas Wilkins were among the best at the late exhibition. This is a very fine yellow, although a bit dull in colour. Kentish Yellow is also excellent for early flowering. M. Ch. Molin, a newer sort, is good in October. The same may be said of that remarkably handsome kind M. Aug. de Lacvivier.

For the supply of a quantity of cut flowers, Mme. C. Desgrange is a most useful white at this time of the year, the yellow sport G. Wermig being an excellent companion to it. A variety of especial value is Ryecroft Glory. I have seen this in fine condition several times this season. The bronzy yellow colour is a valuable shade, which is remarkably rich by gaslight. This variety makes a nice bush plant, but is not adapted for producing large blooms. Elaine is now in full flower; this is not surpassed for the purity of its white. Lady Selborne is also an excellent white, the yellow variety of it being equally useful. Source d'Or is nearly out. This is still the best of its shade, and a favourite with all because of the richness of its colour under artificial light, and it mixes well with whites and yellows. The early sort, Wm. Holmes, supplies a fine crimson, which will be difficult to beat. I have mentioned Mlle. Lacroix as a show bloom. This is also most charming for cut flowers; it produces smaller blooms in great abundance, and they are always elegant. Somehow the yellow Lacroix or Mr. C. E. Shea has not been so popular as the white; still it gives the same grace of form and is equally as free as the type. Louise should be tried in the bush form without disbudding. I am sure this pearly-blush variety would find admirers, and the dwarf free growth is suitable for such a mode. H. S.

NOTES ON CULTURE.

With the present extraordinary hot weather the chief aim of the cultivator will be to keep the plants that are intended to produce large blooms as cool as possible. In vineries, Peach houses, greenhouses and such structures the plants can be kept cooler than when standing in the open under the fierce sun. The plants should be given as much space as possible to avoid an early loss of their leaves. The development of the blooms must be hindered by a premature loss of leaves; it therefore behoves all cultivators to retain them as long as possible. Shade must be provided in some form or other, not only for retarding the flowers, but for their preservation. Under the shade of Peach trees and Vines artificial shading is not needed. In the greenhouse the ordinary roller blind must be kept continually down whenever the sun shines upon the house. In the absence of temporary shading the glass should be covered with lime, to which is added some flour to make it adhesive. Clay made into the consistency of paint is a good shading material. All the ventilators and doors should be opened wide both day and night, admitting a free circulation of air. All plants that have not opening buds should be syringed once or even twice daily during this extra heat. Not only does this render the atmosphere less arid about the plants, but the opening buds unfold more easily. Mildew must be sought after rigorously. Where sulphuring is necessary syringing the leaves must cease. Brown sulphur is the best, being the least objectionable in colour and quite as efficacious as that of the ordinary shade. The plants must receive regular attention in watering. They will not require so large a supply as when standing out of doors, but they must not suffer from want of it. Examine them carefully twice daily and apply it only when the soil is approaching dryness. Some care is necessary at this stage in the employment of stimulants. Giving these too freely or too strong may cause the blooms to drop at a later stage. Plants that have thick unripened stems, heavily clothed with large succulent green leaves, require next to no food. Plants that have medium-sized stems, fully matured and corresponding foliage, will be all the better for some stimulant in liquid form. Plants belonging to this latter category are, as a rule, well supplied with fibrous roots, and abundance of them on the surface. It is these that revel in supplies of liquid manure. E. Molyneux.

SHORT NOTES.—CHRYSANTHEMUMS.

Chrysanthemum Mme. Albert Menier.—A Japanese of the early type, narrow florets; colour pure white, centre tinted soft sulphur-yellow; good flower-stalks, very useful for cutting.

Chrysanthemum Prefet Cassagneau.—A new early-flowering variety of a deep rich velvety crimson colour. An early Cullingfordi, one of M. Simon Délaux's novelties, sent out last spring.

Chrysanthemum M. Backmann.—Another new early Japanese. Blooms rather large; the florets are long, and the colour a warm shade of golden terra-cotta, suffused salmon, reverse golden, forming a ball in the centre.

Chrysanthemum Mme. Emile Nonin.—An early Japanese, very free, and comes in clusters; long florets, of a delicate shade of pale sulphur-yellow, tinted lemon-yellow in the centre. A pretty flower of medium size.

Chrysanthemum Meduse.—Also an early-flowering Japanese variety of this year's introduction. The colour is golden amber, tinted crimson-bronze, a rich and effective tint. Rather large in size, and free blooming.

Chrysanthemum Mme. Armand Groz.—A Japanese early variety. A pretty little flower, but the flower-stalks are rather weak; long, narrow, revolute florets; colour pale primrose-yellow, faintly tinted salmon in the centre.

Chrysanthemum Lady Esther Smith is recommended as an October flowering variety, and it certainly possesses all the characteristics of a deserving sort. The pure white, long and broad florets incurve somewhat irregularly.

Chrysanthemum Mme. Henri Jacotot.—A Japanese early variety, with long flower-stalks and rather large in size, long intermingling florets, pointed at the tips; colour white, suffused pale purple-mauve, reverse same colour; delicate and graceful. A French seedling.

Chrysanthemum Boule d'Or (Calvat's variety). Although appropriately named, it seems a pity that this name should have been chosen for this new Japanese. It is quite true that the old variety once so deservedly popular is seldom seen now-a-days. The new-comer has all the points of a good flower. The petals are medium in width and perfectly, if loosely, incurved. The colour is pleasing, the reverse being a nankeen yellow. The surface is gold at the base, with a golden suffusion.

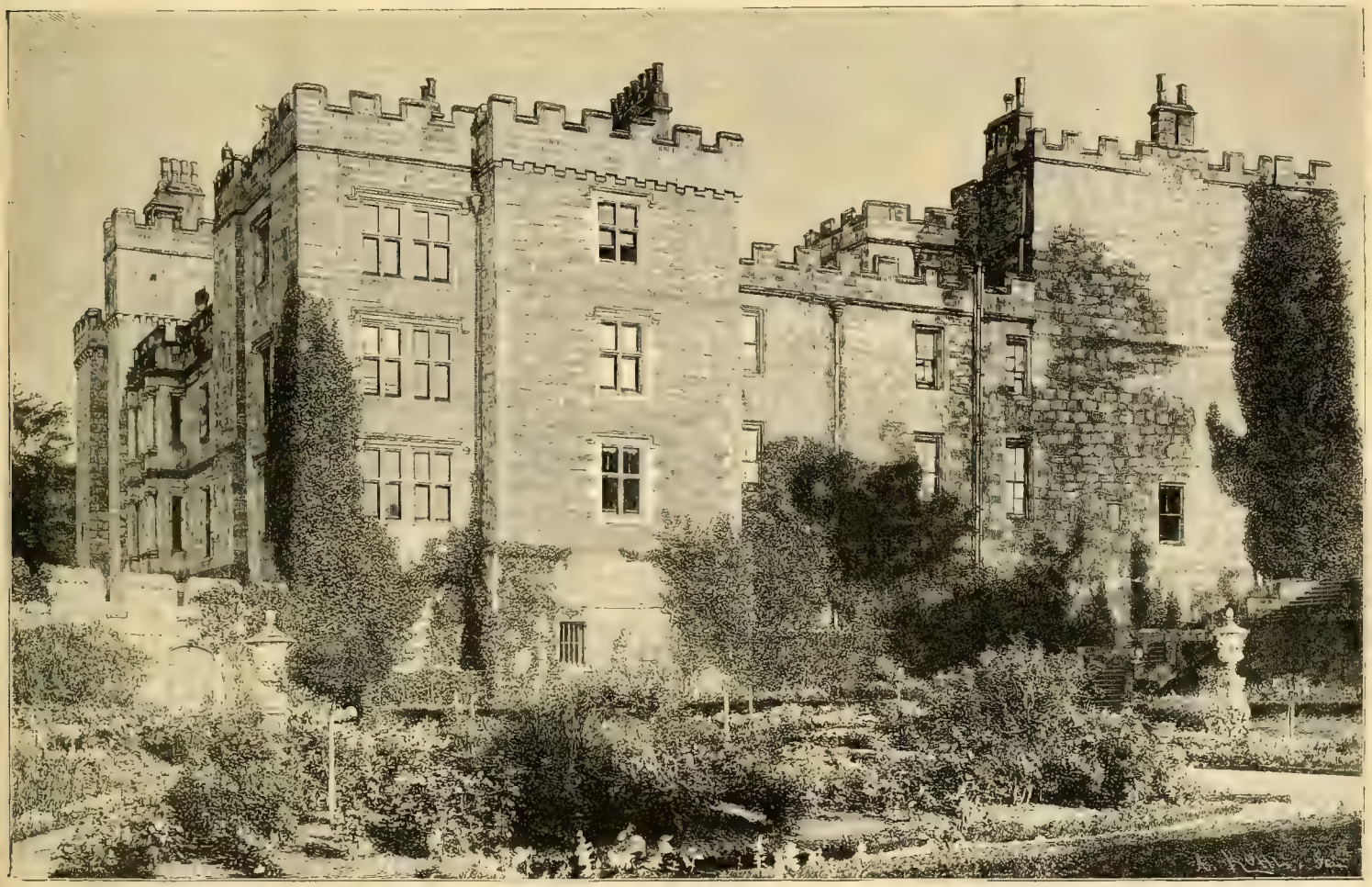
Chrysanthemum Philadelphia.—This much-advertised American seedling was raised by Mr. H. Graham, and it holds the unique position of being the only American variety that has ever had the silver-gilt medal of the N.C.S. conferred upon it. When shown last autumn at the Aquarium it was a large white Japanese incurved, with lemon-tinted tips. I saw some opening buds of it a week ago on some very dwarf late-struck plants, and the colour was a dirty yellowish white. This defect, however, may pass off as the flower expands.—H.

CHILLINGHAM CASTLE.

Chillingham is on a ridge of land nearly 1000 feet above the sea in a rocky moorland district, intersected by deep and beautifully wooded glens. It is about fourteen miles from Alnwick, and the visitor who would see the beauty of this northern district should travel by the branch line that runs from Alnwick to Cornhill, leaving the train at Ilderton. From here for a distance of about three miles a charming valley is traversed, a district where the fields and roads are bounded by good hedges and the Sweet Brier is abundant, and borne down with the weight of its heps. Here, as in the south, the Sweet Brier was flowering in mid-October, and the effect of its long shoots, scarlet with fruit, falling outwards from the Hawthorn hedge, was very beautiful. From the public road the castle is reached by a broad drive, which passes through an avenue of Lime trees backed up by woods on either side, from which one emerges into a broad open clearing with a high wall on the right that forms the supporting wall of the flower garden above, and on the left rich Grass adorned with a few trees slopes away down to the woodland again. This, the carriage front, is bold, simple, and dignified, a fitting approach to a noble building whose history is bound up with the Border warfare of earlier days. Chillingham is the home of the Earl of Tankerville, and while some of the building is of great age, it has been extended and enlarged considerably, little remaining of the original structure. It has a tower at each angle, and surrounds a courtyard, in which is preserved a famous toad-stone—a block 5½ feet long, over 2 feet broad, and 1 foot 3 inches thick, the cavity in which the living toad was discovered many years ago being several inches in depth. Originally this stone formed the hearth of a fireplace in the castle, and a particular spot was noticed to be always damp, which could not be accounted for, so the stone was removed and the toad discovered.

The illustration here given shows but a small part of the handsome terrace garden, with its beautiful retaining wall 120 yards in length. The wall alone was a perfect picture at the time we saw it. In one part it is covered with Ivy; elsewhere a large bush of Berberis vulgaris had grown several feet higher than the wall, and was a mass of colour with its crop of berries. Clematises hung in festoons, with Ivies, Vines, a fine plant of the climbing Hydrangea, Pyracantha and other plants, while in front of the wall a long border was planted with some of the best hardy and tender flowers. The flower beds, although somewhat angular, are of sufficient size to permit of bold grouping, and this is so well done that the form of the beds is less seen, and the blending of the colours of the many flowers was well carried out. Many hardy plants are here well grown, from the stately Delphinium down to Hepaticas. Choice wild Roses and hardy Fuchsias give height and boldness to the arrangement, and the whole terrace in summer and autumn days is gay with colour of the truest kind. We must not omit to mention the wall at the end of the terrace, which is partly overhung with trees, its face in a great part hidden by a lovely veil of that pretty native Fern, Asplenium Trichomanes. From here, ascending a flight of rough Moss-covered steps, Grass slopes adorned with trees make a pleasant shady corner, and we pass on to the south front of the castle, which has a broad gravel walk in the foreground and a lawn that merges into the park and the adjoining pastures.

The park, about 1500 acres in extent and surrounded by a stone wall, is the home of the herd of wild cattle for which Chillingham is famous, also herds of red and fallow deer. The park landscape is rich, wild and romantic, and near to the castle are delightful wooded denes through which runs a little stream whose rocky bed forms a series of miniature falls between steep banks garlanded with many native Ferns. Beyond lies a large, undulating, rich Grass valley, and from this the ground rises higher and higher; the scene is changed with the elevation, and one looks upon a great dark slope of Pine wood, whilst above this, clear against the sky, is the summit of Ros Hill, about 1200 feet high. To look out from Chillingham upon its magnificent park is a picture that brings a sense of satisfaction into the mind, but a finer picture is that from the summit of Ros Hill for a standpoint. The climb is a long one, as the way lies outside the park wall for safety from the cattle, but the path passes through beautiful natural woodland of Beech, Oak, Birch, and Moun-



Chillingham Castle, Northumberland. Engraved for The Garden *from a photograph by Mr. J. T. Hopwood, 5, Bury Street, St. James's, S.W.*

tain Ash rising out of carpets of Ferns, thence emerging into pastures of deep rich Grass, wherein stands an ancient relic of Border strife and cattle-raiding in the old cattle keep, into which the animals were driven, secured, and defended. From here a steep climb begins up a craggy slope, so exposed and wind-swept, that even the Heather scarcely raises its head, but spreads in carpets on the ground like the mossy Saxifrage. When the summit is reached a glorious view is obtained of land and sea, barren moors, fertile valleys, and wooded hollows. The long line of the Cheviots, with the highest peak hidden in a cloud, bounded the view in one direction. The river Tele, as a silver streak, wended its circuitous course through a valley till lost to view in the district of the Tweed. Flodden Field lies within easy range of the eye, whilst of other castles, besides Chillingham lying almost hidden in its surrounding trees could be seen those of Alnwick, Warkworth, Dunstanburgh, Bamborough, Copland, Haggerstone, Norham and Ford, with Holy Island, the Farne Islands, and a long line of seacoast.

Returning to the castle grounds, a pretty way lies through the dell, where tree and bush, Fern and flower blend into a series of combinations that vary with every turn and change with the seasons, beginning with the Snowdrops and ending with a rich feast of colour in autumn fruits and tinted leaves.

The kitchen garden, like the flower garden against the castle, is a good one, with fine walls, large open quarters for vegetables and broad borders of hardy flowers that make the spot gay whilst providing flowers in abundance for cutting. These departments, together with the glass, are ably managed by Mr. R. Henderson, the gardener. The glass erections are limited in number and so confined in scope, that plants and fruit have of necessity to be grown together in the same structure, and it is done admirably. We saw excellent crops of well-finished Grapes, whilst one vinery had its back wall hidden with zonal Pelargoniums trained upon it, reaching to the top, and 14 feet in height. They here bloom in profusion, particularly in early summer before the Vines restrict the sunlight. The varieties were Purity, Vesuvius, Polly King, Henri Jacoby and Colonel Pearson. In another vinery Figs cover the back wall and are trained down the roof about 2 feet to meet the Vines. They also fruit admirably. A house devoted to Peaches contains fine trees of Princess of Wales, Noblesse and others, whilst upon the back wall here was a magnificent trained specimen of the Ivy-leaved Pelargonium Souvenir de C. Turner, and a fine plant of Smilax aspera. Pears are finely grown on the kitchen garden walls, and some of the best Apples are here grown on walls. The Apple crop has been an exceptional one this year even in northern gardens, and in the fruit room we saw an admirable lot of fruit grown upon bush trees in the open quarters of Emperor Alexander, Peasgood's Nonsuch, Lane's Prince Albert, Warner's King, Yorkshire Beauty, Northern Dumpling, and others. Annuals are generally seen to better advantage in cool northern gardens, and one charming border of them was delightful with the blue Nemophila for an edging, backed up by a broad line of the spreading rose-flowered Saponaria calabrica, and behind this a line of the graceful flesh-white Gypsophila elegans.

H.

A profitable glass house.—It is not every gardener who has the advantage of a good range of fruit and plant houses, where successional supplies can be brought on with comparative ease, yet good results are often achieved under adverse circumstances by the exercise of forethought. One of the most profitable houses that has come under my notice is a somewhat lofty lean-to, having lights some 4 feet wide, slanting from the top of the house at the back, these also serving as ventilators and admitting a good deal of extra light to the back wall. Trained to the latter are Figs of various varieties, grown in narrow slate boxes arranged on stout supports some 3 feet from the base. These, after reaching the top of the wall, are allowed to travel a short distance down the main roof facing the south, being fastened to wires. Capital crops are annually obtained from these trees, the fruit being gathered from the top of the slanting stage, which occupies the body of the house. In each corner of the house, close to the front lights, another slate box is fixed, a Peach being planted in one and a Nectarine in the other, these being trained to a trellis over the pathways at each end of the stage. At this season of the year, when the fruit trees are at rest, the stage is filled with Tree Carnations and minor side shelves with double and single Primulas, Cyclamens and Solanums. In spring, when the Carnations have done blooming and the cuttings are taken, the stage is cleared and sometimes refilled with Tea Roses, which in their turn are placed in cooler quarters to harden off, pot Figs being then taken in to fill their place. A stout shelf along the front of the house accommodates a row of early pot Tomatoes, the plants being trained to a temporary trellis suspended on hooks over the front pathway some 15 inches from the glass. The quantities of fruit and flowers produced in this house from January to December are astonishing, and the various arrangements here described might be profitably imitated in many places lacking space and convenience.—J. C.

FLOWER GARDEN.

DAFFODILS IN ORCHARD AND WOODLAND.

THE above-named positions are perhaps the most serviceable for the proper utilisation of the Narcissi. Both phases of gardening are too often found suffering absolute neglect, at least in respect to those plants to which this note directs attention. It would be difficult, if not impossible, to name any position in which many of the Daffodil family appear so beautiful, so natural, or so much at home. The very Grass, the trees, and, above all, the natural virgin soil of such places are so much theirs by nature, that one wonders why Narcissi are not planted in their thousands where such places exist. What charming vistas may be opened up in a bit of woodland where such gardening is successfully carried on. From quite early in the year when such places may be aglow with many bulbous plants till quite late in the year, when day by day the Dogwood seems to grow more intense in its colouring, should there be something of interest in foliage or in flower. I well remember a very pleasing and interesting bit of woodland gardening at Sydenham many years ago in the gardens of Mr. Latimer Clark; indeed, it was a portion of the original Dulwich Wood, where Oak was the staple timber and Hazel the principal of the undergrowth. The soil was a yellow loam and rather heavy. Some three acres or more of this woodland portion were made very beautiful with a large variety of inexpensive plants. In this way the sides of the woodland walks were each year aglow with quantities of Primroses quietly nestling among the Grass, and later with Wood Hyacinths, Anemones, Narcissi, Lenten Roses, Tulips, Lilies, Bamboos, and other things, including several forms of Helleborus niger. What gives the charm to this phase of gardening is the natural surroundings of the whole. This applies with equal force to naturalising in orchards and meadows as it does in the woodland and wild garden.

Among the double Daffodils there are none to beat a good strain of the old yellow N. Telamonius plenus. I say a good strain, because there is a wide difference even in double yellow Daffodils, one strain being very much addicted to disease, while another growing in the same soil and under similar conditions seems proof against disease. In spring-time in grassy meadows or woodlands the golden blossoms of this Daffodil are most effective, and the bulbs continue a long time in health and vigour. For such work it is much best to plant fair-sized bulbs at the start, because the progress and increase of the bulbs are much slower than in the deeper tilled and richer looser soils of the garden. Many kinds of Narcissi, for example, N. pseudo-Narcissus, obvallaris and Ard-Righ, that are only rarely a success in ordinary garden soils, often flourish in the soil of the pasture or meadow—possibly because the soil is free from the often over-abundant added manures of the ordinary garden, which tend in the direction of loose, flabby tissue only. The meadow land, on the other hand, is of that uniformly pure nature, such as Nature alone provides. Then again there is uniform solidity of the soil surrounding the bulbs and roots, and these conditions combine, I think, to the production of uniform solidity in the bulbs themselves. Ensuring in the first place a more natural slow growth, we get in the result bulbs of small proportion, but firm and hard as a nut; and it is just such bulbs as these that may remain for years in the soil of the meadow pasture, orchard or woodland without developing disease. In the course of years I have had experience of many hundreds of thousands of collected Narcissi, mostly obvallaris, princeps, and at least two distinct forms of the old double yellow, all collected in a wild state on British soil. Coming to hand in the fall of the leaf, I have had opportunities for observation not obtainable otherwise, and the first thing that strikes one is the uniform smallness of the bulbs, next the comparatively few flowers they have borne, and third, the great depth they have been in the earth. But the greatest pleasure of all is the perfect immunity from disease. The foliage a full deep green to its very tips and a good wig of roots below, accompanied by a nut-brown skin in the Tenby Daffodil, are the surest indications of perfect health. And in a very similar way do these bulbs behave in our orchards and woodlands. In such places as these they give no trouble beyond the original planting, and in spring-time may be seen in all their freshness and beauty.

Especially suitable to the places named are such as the Lent Lily (N. pseudo-Narcissus), to be obtained at a mere trifle per thousand, and equally cheap is the old Pheasant's-eye Narciss, which is most showy in the grass, while its late flowering will afford a succession to earlier kinds. This kind has long stems and stands well above the growing grass, whilst its pure and fragrant flowers are very telling. Other kinds equally well suited are the bulk of the numerous single forms of incomparabilis, Leedsi, with its pure white starry flowers, Burbidgei and many others. For very early work the Pyrenean kind, pallidus præcox, must not be forgotten, and it is quite possible it may be established in such places with greater ease. Then again, princeps is an excellent kind, a

well as obvallaris, Ard-Righ and maximus; and lastly, the double yellow Telamonius is invaluable; indeed, there is no limit to suitable kinds. At the same time many of the very cheapest are among the most useful. By securing such as these, a good display may be obtained in a few months from planting. Once a start is made and a foretaste of the results apparent, additions will almost be sure to be made year by year, and in this way the hitherto neglected spot in the garden will henceforth be teeming with pleasure and interest. E. J.

NARCISSUS PRINCEPS.

There are "Daffodils and Daffodils" now-a-days, and when it is advised to plant them in the Grass in the hope and expectation of their thriving and increasing year by year, it is by no means every kind of Daffodil that will fulfil



Narcissus princeps at St. Nicholas House, Scarborough. From a photograph sent by Mr. E. H. Woodall.

that fond hope. Nearly all of us must have seen our native Daffodil or Lent Lily in its beauty in woods and moist meadows where, before the advent of these wild-flower-selling days they made a carpet of beauty fit for a queen, but how many or how few of us have succeeded in making them grow in any garden? The common double Italian Daffodil is so coarse beside our native form, that I for one, and no doubt many others, do not really care to plant it in quantity, though it at any rate will grow anywhere in reason. Narcissus princeps, called by some the Irish Daffodil, is, however, so beautiful in colour and form, as well as so hardy and cheap, that I think it fulfils every condition required by planters of trumpet Daffodils, and flowers sometimes with incredible abundance. Under the shelter of some large-leaved Aralia Sieboldi bushes a group of this Daffodil looks particularly well, and with this shelter comes a little earlier also. Certainly last spring after the severe winter the combination of the broad green fan-like leaves of the Aralia-like parasols over the dainty heads of the Irish Daffodil was much admired, and in the extra bright sunshine of last March reminded more than one of the delights recalled by the name of Wordsworth. E. H. Woodall.

Scarborough.

Chrysanthemum Zawadski.—At first sight this plant in its flowering bears some resemblance to a blush white single Pyrethrum, but a glance at the foliage carries one away to some of the larger kinds of mossy Saxifrages. In this rather strange combination of foliage and flowers the above plant is not without interest. A good-sized plant in the rock garden at Kew has been flowering very freely during the past summer, though only about 1 foot high. In the deep soil of the border the plant assumes greater vigour, and makes a good dwarf front row plant, being neat and compact.—E. J.

Statice latifolia.—Among late summer and early autumn-flowering perennials this broad-leaved Statice is too rarely seen. It is perhaps the boldest and showiest of the hardy kinds, and as such deserves a place in every garden where hardy plants are grown. Its requirements are simple, since, given a good deep loamy soil and moderately rich, it attains to perfection. If only one kind were selected, whether for rock garden or border, I would choose this one. Once well planted, it should not be disturbed for several years. If planted in the rock garden, a deep fissure filled with loamy soil to nearly, or quite, 2 feet should be selected, and in such a way that the moisture may be retained for the benefit of the plant. In such a position, and where its large, broad shining leaves may overlap some projecting rock, it will display itself to advantage, and the broad, dense, cushion-like heads of lavender-coloured blossom will be quite a feature. The plant may be increased by seeds, although these are often of slow growth. By far the best mode of increase is by root-propagation in January. By lifting a plant in the border several large roots may be detached. Cut these into lengths of an inch or more and insert in sandy soil around the inside of 5-inch pots. By placing in a greenhouse temperature and keeping dark meanwhile, young leaves will appear in a month or six weeks, when more light may be gradually given. When large enough, pot them singly and eventually plant in permanent places in the garden.—H. H.

Clematis graveolens.—After our own native Traveller's Joy is over and but few flowering climbers are to be met with, the blossoms of this Clematis are especially welcome and interesting from the fact that they are of a decided yellow colour which is but little represented among the different members of the genus. It is by no means a novelty, having been introduced from the Himalayas in 1771, but it is very uncommon. This Clematis is a free-growing climber, and after the flowers are over the large downy heads of seed are very noticeable.—T.

Exterminating British plants.—The work of collecting Briers for nurserymen who make a speciality of standard Roses will soon be in full swing, and in Hampshire there are a good many thousands of acres where the collectors of these ply their trade. Unfortunately, they do not confine themselves to collecting Briers, but the work of exterminating goes on all the year round until a good many beautiful British plants are nearly and in some cases quite gone, as far as their native wilds are concerned. These men who collect know where to find any varieties of British Orchis, Solomon's Seal, or any other plant you like to ask them for. But it is in Ferns they are most active. If there is a colony of Osmunda regalis they will get them in some way or other. Many other Ferns are ruthlessly grubbed up at all seasons and carted away to ornament the back gardens of smoky towns, where, as may naturally be supposed, they have a very brief existence. We have societies for protecting wild birds, and surely our beautiful wild plants might have a corner devoted to them in some of our public gardens.—J. G., *Gosport.*

IRIS LORTETI.

The annexed cut represents one of the most beautiful of the Iris family—in other words, one of the loveliest of hardy flowers and one surpassed by few plants, hardy or tender. The colouring of Iris Lorteti seems somewhat variable. In the variety figured the large standard petals are almost white, closely veined with very delicate pale lilac; the falls creamy, dotted



Iris Lorteti. From a photograph by Mr. G. Pim, Dublin.

with reddish chocolate, becoming denser as they approach the stigmas, which, on separating the standards, are seen to be deep reddish brown. It belongs to the Oncocyclus section (of which I. Susiana is the best known representative), and blossomed with me on a sunny bank, well elevated, in the early part of this summer. I

am trying Mr. Ewbank's plan of removing the soil during the resting season and keeping the plant quite dry till it shows signs of starting into growth. This charming plant is now fairly cheap, and should be in the hands of all lovers of choice things. For a detailed account of the Irises of this section, see The Garden, vol. xliii., p. 130. Greenwood Pim.

LILY OF THE VALLEY.

The time is fast approaching when gardeners who are required to have an early supply of this popular winter flower will have to place their crowns in heat. A good deal of disappointment is annually experienced either by the crowns refusing to move or by a sudden collapse of the growth when half completed. The cause of failure is generally attributed to the unripeness or unsuitability of the crowns for early work, but more often than not the cause lies in a fluctuating bottom heat. A plunging bed which has one temperature to-day and another to-morrow is not at all suitable for early batches of Lily of the Valley crowns. Many are spoiled by being plunged in made-up beds of leaves and manure, which retain perhaps a heat of 90° for a week or ten days, and then drop to 70°. The former figure is not too high from the time the crowns are plunged until the spikes are well-nigh developed. For some years past I have succeeded well by placing a thin board over the evaporating pan on the hot-water pipes in the Pine stove, standing the pots on this and packing Moss between and around them. An inverted pot is then placed on each of those containing the crowns, and watering with water at a temperature of 90° or 95° is resorted to every morning, as if the soil once becomes dry failure must follow. Since adopting the above plan I have seldom had a patchy lot, as the bottom heat is steady and continual. The inverted pots remain on until the lowermost bells expand, when the plants are removed to a kerb to finish opening. When once out they keep much longer in a temperature of 55°. Many of the beds of Lily of the Valley in the open air fail through sheer starvation. Although this flower needs good drainage, frequently too much leaf mould and light soil are used in forming the beds. Some of the best crowns are grown in Norfolk, and I know that a good deal of cow manure is used. Plenty of space is allowed between the rows, and the second year a furrow is made by a special tool between each row, this being filled with cow manure, which is firmly trodden in and the soil again placed on. Into this the young roots eagerly rush, and fine foliage and crowns are the result. Mulching and watering are also resorted to in dry summers. One most important point in open-air culture is keeping the crowns well above ground in order that the sun and air may mature them. It is said that the imported crowns are much dearer than usual this season, due, I presume, to an indifferent season abroad. This will hinder many of the small growers for market from purchasing, as there is never a vast profit realised from the sale of the blooms, and the public are unwilling to pay any advance on the usual price, no matter what the producer has to contend with in this respect. Although I am no advocate for having flowers out of season, Lily of the Valley is now had by several trade growers nearly all the year round. I am informed it is accomplished by letting the crowns become frozen through in winter and afterwards burying them in the ground some 3 feet or 4 feet deep. Thus they remain in a dormant yet sound state, and are taken out at intervals as required and forced. J. C.

The poison of Primula obconica.—I have handled Primula obconica for upwards of five years. In November, 1891, having read and heard a good deal concerning the irritation caused by this plant to some people, I determined to try the effect on myself. I took some leaves and lightly brushed them up and down the inside of my right arm from wrist to shoulder. Waiting a few days and finding no irritation, I bruised some more leaves and rubbed them on the same arm in a similar manner, and still there were not the slightest signs of irritation. I then concluded that this plant, although possibly dangerous to some people, was harmless to myself. I continued handling it with perfect impunity, cutting flowers, cleaning, potting, &c., till the spring of this year, when I shifted a batch of this plant (out of bloom), and the next day the back of my right hand was covered with a rash similar to that of scarlatina, and the itching was well-nigh unbearable. Suspecting the cause, I went to a chemist who gave me a lotion, in which sulphur appeared to be largely predominant, and which soon relieved the irritation. Not being quite satisfied, about ten weeks afterwards I brushed the under part of a leaf over my hand and the rash again appeared attended by the itching. In my own case I feel sure that the hairy growth under the leaves and not the pollen was responsible. As far as I can remember, on the occasion of my experiment in November, 1891, the weather was cool and my blood was at its normal temperature, whilst in the spring of this year the weather was very hot. No one else here who has handled Primula obconica has suffered in consequence. As for Primula japonica, I have had no experience with it.—A. C. Bartlett, *Dropmore Gardens, Maidenhead.*

Staking plants.—It is painful to see the beauty of flowers so often spoilt by the use of conspicuous stakes for their support. Staking is an evil—a necessary evil I admit, but still an evil—which should as far as possible be concealed. Many gardeners (excellent cultivators) seem to take a pride in the size, number and aggressiveness of the supports used by them, and, as a consequence, in such cases the attention which should be focussed on floral beauty is distracted by these inartistic adjuncts. I have lately observed two glaring instances of how staking should not be done. In the first, some splendid auratum Lilies (7 feet high) were firmly fastened to large posts fully 1 foot higher and of quite unnecessary diameter. In the second, large-flowered Chrysanthemums standing in a conservatory had each flower-stalk closely tied to bright yellow Bamboo canes, which separated the florets and overtopped the blooms by many inches. Bamboos and other light-coloured stakes should be painted a dull green, and as soon as the plants have completed their growth should be cut down as low as is consistent with giving secure support. In the garden staking is often left until too late, the result being that the plants present a bunched-up appearance which much detracts from their beauty. Starworts and other tall herbaceous plants should have several thin canes inserted in the clumps while in growth, and loosely looped together with tarred twine, rather than that one large stake should be used, although the latter may easily be added in the midst of the clump when growth is almost finished as an additional security and without being noticeable. Lilies—even the tallest Tiger Lilies 6 feet high—can be easily secured to 4-feet Bamboos inserted 1 foot into the ground. If care is necessary in the staking of border plants, it is even more needful in the case of those grown in pots which are intended to be used for indoor decoration. Freesias are very lovely and lasting in the house, but are often rendered unpleasing in appearance by the nature of their supports. Stiff wire painted to match the colour of the leaves is inconspicuous, and detracts nothing from their graceful contour. In all cases where staking is a necessity a study should be made of how best to create the impression that the plant is growing unsupported, and to render invisible any adventitious aid that may be required.—S. W. F.

Planting Irises.—In almost all gardens where cut flowers are needed during May and June the English and Spanish Irises are now regarded as indispensable. Unfortunately, they do no good with me after the first season, although the soil is light and the drainage good. I always get my bulbs in during October, as by keeping they lose weight and the blooms are in consequence smaller. I plant on both a west and north aspect, and thus prolong the season. Old Mushroom bed manure dug into the borders suits them well, rotten farmyard manure being apt to cause basal rot. Many of he mixed varieties of Spanish Irises as well as the named self-coloured sorts are exceedingly beautiful, rivalling the choicest Orchids. Yellow-coloured flowers being in great request here, Canary Bird is much appreciated. It is of a delicate pale yellow colour. Jupiter, another yellow of a deeper shade, is also very effective. Lady Blanche, fine pure white with orange blotch, forms a fine contrast, and reminds one of some of the choicest Dendrobiums. The English Iris flowers about a fortnight later than the Spanish section, a great advantage where a succession of flowers is wanted. The flowers embrace almost every existing shade of colour, and although they do not travel or last quite so well as the Spanish, they create a brilliant effect in the drawing-room, being best arranged not too thickly with no other foliage but their own. Many of the Irises do best if left undisturbed, but I find the German varieties need dividing about every third year and replanting either on an entirely fresh site or in new soil well manured. The old purple variety can still hold its own, although many of the newer varieties are very delicately and pleasingly marked and mottled. Although thriving in almost any soil, they prefer one retentive of moisture, but not stagnant. The present is a capital time to plant that beautiful little gem Iris reticulata. This is exceedingly hardy, blooming in the keenest spring weather, and possessing a fine aroma not unlike Violets. It is most useful for forcing in a gentle warmth, and then comes in well for mixing with small Ferns in fancy baskets in the drawing-room.—J. C.

PLANTING DAFFODILS.

The planting of all kinds of Daffodils should now be pushed forward without further delay. No doubt many will have ere this replanted their bulbs, and root-action will have already begun once again. For a large number of kinds I am strongly in favour of early planting, say any time during September. But there are not a few others in this large and varied race of bulbous plants that I feel sure are benefited by a longer season of rest than is usually given them. This prolonged season of rest, however, must not be taken wholly from the one end, but rather be the more consistently divided between early lifting and moderately late planting. All Daffodils should be in the soil by the end of October at the very latest. From a rather close acquaintance with the nursery stocks of such things, I have during a series of years been enabled to watch the behaviour of many kinds that trade requirements have rendered necessary to lift each year. My observations prove that, so far as English or Dutch grown bulbs are concerned, I find no appreciable difference in quality or quantity of bloom between planting in the middle of August or from that time to the middle of October; but if the planting takes place much after that time, there is always a distinct failing off in stature, and more especially in foliage. Indeed, this always ensues, even supposing the bulbs are only a month out of the soil. But it is fortunate also that this falling off in foliage does not represent a proportionate reduction in the flower-stem provided the bulbs are planted by the time stated above. Yet, as proving how this diminution of foliage is affected by later planting, I have found that odd lots left over till nearly Christmas-time will scarcely produce a leaf at all when March comes round; or if any leaves appear it may be a distorted one, and a flower that just wriggles itself out of the bulb somehow. Take the well-known Emperor Daffodil. I have lifted giant bulbs of this kind that carried foliage upwards of 2½ feet high not drawn in the least, but broad and substantial withal. These identical bulbs, duly dried, rested and replanted after six weeks, would only carry foliage about half of the former length, proving in this

particular kind that the period of rest was not helpful. But all our Daffodils are not Emperors, for if they were, annual lifting would not be an absolute necessity. It is just such as this that we may with safely in most soils leave undisturbed for at least three years and more, provided ample room be accorded the bulbs at first. These remarks apply equally to Horsfieldi, Empress, Grandee, princeps, maximus, poeticus, its variety ornatus, and the double albus plenus. Sir Watkin is another that must not be overlooked, and many more from this same group might be named did space permit; in fact, lifting, and annual lifting in particular, with certain kinds must be adopted if we would keep them in health. I have, however, specially named a few good kinds that any amateur may plant fearlessly, and with little trouble after expect a yearly return. One of the slowest to give returns perhaps is maximus, but it is a grand thing and worth waiting for. This kind not only approves of the let-alone system, but it is better with a comparatively holding soil, though well drained, and to this may be added deep planting. Quite recently I was comparing notes as to this kind with Mr. W. B. Latham at Birmingham, only to find his experience much the same as my own, with this addition, that for years it flowered well at the foot of a shrub; but, wishing to increase it, Mr. Latham lifted it and planted the bulbs in better ground. They were not suited by the change, and eventually were replanted in a position similar to the orginal, with success. Planted in these positions, however, it must be clearly understood that the increase of the bulbs is distinctly slower than in the open garden soil. For instance, the base of a group of Privet, or a hedge of the same, would be a good place for such kinds as cernuus, Ard-Righ, obvallaris, and many others that object to the richer garden soil; indeed, the association of the roots of other plants appears suitable to many Daffodils. In these positions I would recommend deeper planting, say fully 6 inches, unless it be the very small kinds, as Corbularia, triandrus and others, which are better accommodated in other ways.

I am fast getting the Daffodils planted, and as the work proceeds one comes across a stray bulb that has been overlooked in the July lifting. In this way some fine bulbs of the Tenby Daffodil have been upturned, already with a great wig of new roots fully 6 inches long and literally encircling the base of the bulb. And not only roots, for there is fully an inch of top growth, which is considerable for the time of year. It is a great pleasure to see this sturdy little Daffodil in such good health, though it is one of the most difficult to keep healthy in many gardens, and it can only be done with annual lifting or by planting in positions such as I have suggested above. For the general well-being of this kind, however, I would prefer that the bulbs be quite dormant till the middle of September, and I would place such as Ard-Righ, Golden Spur, and the spurius kinds generally on a similar footing, believing that the enforced rest to this date is rather beneficial than otherwise. The more vigorous kinds, however, may be planted as early as procurable, and the earlier the better. Where space permits I would give plenty of room to free-flowering and robust kinds such as Grandee, princeps, Empress, Horsfieldi, Sir Watkin, Barri conspicuus, and others. The two first named will if good bulbs are planted at first yield three and four flowers each when two years planted without disturbance, and thus seen are simply grand in clumps. Some years ago I planted at the foot of a small Privet hedge half a dozen bulbs of Grandee. With a view to a permanency the bulbs were allowed a patch of 18 inches across. Turning up the soil nearly 2 feet deep, I placed in at a foot deep a rather heavy layer of cow manure, and replacing more soil, finally planted the bulbs at 5 inches deep. All bloomed the next spring, and with increased flowers the year following, I think an average of two flowers each. But at their third flowering, or two and a half years from the date of planting, these six bulbs produced exactly twenty-one grand flowers, and this is just the way an amateur should plant his bulbs, viz., treat them all specially, and with good sound bulbs they will quickly repay. In the first place, make sure of obtaining the most vigorous kinds, and always include Grandee, for it has a special value by being late flowering. For the more frail and weakly always avoid manure, and even where manure is employed keep it at least 6 inches below the bulbs, and let it be well-rotted material. Where the soil is very heavy and clay-like employ river sand if possible, burnt brick earth, and charcoal dust in plenty. The last may in all heavy soils be freely applied with all kinds, or even in nuts, putting a handful about the bulbs at planting time.

All Daffodils that were lifted either late in June or in July and properly dried should if healthy be now making signs of rooting at the base. Maggot must be always looked for, and thus early is easily detected; bulbs containing such will be soft in the lower part of the neck, and the maggot may be got out with a long pin. If the bulbs have been obtained from a large Daffodil farm, it will be the safest plan to put them in a small linen bag as soon as received, and, including a stone or weight, sink them in a tub of water for twenty-four hours. At the end of that time if any maggots exist they will be emerging from the bulb, and may be destroyed before much damage has been done, but if not captured at planting time the bulbs containing them will assuredly be ruined. H. M.

ANNUAL DIANTHUSES.

The double and single forms of D. chinensis show great range of colour, from white, and a very good white too, through pink, lilac, rose, magenta, crimson, &c.; indeed, there is reason to think but few are aware such a range of colours can be found. There are some types handsomely fimbriated, while some are more inclined to the rounded form. Then the plants vary in height. It is particularly to the forms of D. chinensis I desire to call attention, and especially for the purpose of advocating autumn sowing. In most gardens there is a cold frame or two to spare, and if the seeds were sown in boxes, and the seedlings pricked out to stand the winter in a bed in a cold frame, or kept in the seed boxes all the winter in a frame, and then transplanted to the open in spring, very fine and vigorous plants would result; they would bloom earlier and much better than those sown in spring often where the plants have to remain to bloom. The sowing of annuals comes at a time when there is an enormous pressure of work in the garden, and they are apt to be neglected, and do too often suffer from neglect. A great deal would be gained by sowing in a gentle heat in spring, transplanting to other boxes, and then planting out after being hardened off. Such plants would be of vigorous growth and well rooted, and would bloom abundantly and finely.

D. Heddewigi is the finest form of the annual Indian Pink, and there are some fine varieties of it, such as Brilliant, dark reddish crimson, Eastern Queen, rose, a very pretty variety, and The Bride or Little Gem, white with purple centre, very pretty. The forms of D. Heddewigi were originally round-petalled, and later came a fimbriated or laciniated form, which is much admired, and of this type there are also varieties, such as albus, white, and sanguineus, crimson. Double forms of both have also been produced, but to my mind the single forms are the most attractive and the prettiest. A very fine form of the annual Dianthus is that known as imperialis—taller in growth than the Heddewigi type, with smaller and more compactly double flowers, but an excellent type for cutting from. D. chinensis has several forms, which are practically perennial in their character. I have some of these in my garden at the present time that came from divided plants last autumn. These have bloomed all the summer, and are still furnishing flowers. I often wonder, now that bunches of annuals are being exhibited at flower shows, that these forms of Dianthus are not more grown for the purpose. Bunches of Brilliant tell in a stand because of the colour, and in bunches of exhibition annuals there is generally a want of such colours. Linum grandiflorum rubrum makes a showy bunch, and so does the crimson Malope grandiflora; add to these a crimson annual Dianthus, and three good subjects are provided for the purpose.

R. D.

THE POET'S NARCISSUS.

Regarded as a whole, the varieties of Narcissus poeticus appear to enjoy a peculiar freedom from disease when compared with the other groups. From time to time I have thought a good deal on the subject, but cannot arrive at any conclusion which appears to be satisfactory generally. A year or two since I stated rather emphatically that I believed a species of mite to be the origin of failure with many kinds, and this view was confirmed by a member of the scientific committee of the R.H.S., who made a careful examination of some apparently healthy bulbs. For years I had known these mites to be present on diseased or partly diseased bulbs, and continuing my search I found them present on fairly healthy bulbs, and eventually on others which outwardly were as healthy as it were possible for them to be. These mites had been frequently noticed on bulbs in advanced stages of decomposition, and for this reason had been regarded as the result and not the cause of the rot. This argument, however, would no longer hold good when their presence on healthy bulbs became an established fact, for not only were they found, but it was further discovered that they were burrowing in subterranean structures. A very singular fact in connection is that they appear to swarm in many of the strongest growing kinds, especially of the trumpet section, yet keeping aloof from the more weakly growing poeticus kinds. This apparent impartiality to Narcissus poeticus I can only attribute to something distasteful in the flesh of the bulbs of these kinds, as the mites never attack them, even when such kinds as Ard-Righ, obvallaris and spurius generally are affected in the same garden. In the case of N. p. ornatus, it is possible to succeed with the smallest offsets if planted and left alone for a time, while much larger bulbs of other kinds would quickly become a prey to the pest. Even the ordinary double Telamonius is not exempt, and especially is this true of some strains. Only this summer an instance of failure came before me of these doubles going wrong, and once in a decline there is little hope left of recovery. But with ornatus you may plant the smallest bulbs and in a year or two grow them into very fine bulbs. Three years ago I planted patches of ornatus in a Gloucestershire garden, where the soil is very heavy and the subsoil is clay. The bulbs were the smallest of offsets, and had been very badly used before they came into my hands. A few weeks ago I had the pleasure of digging up these very bulbs, and after three years in the soil they had made splendid examples, the majority of which will produce three flowers each next spring. Such bulbs as these have of course flowered well for the past two seasons. Instances such as these tend to show the suitability of the Poet's Narciss for almost all soils. A well-known and extensive grower of Narcissi once told me that he regarded "five minutes out of the soil as four minutes too long for ornatus," which was simply a figurative way of saying this kind should not be lifted at all. My own experience fully agrees with this view. Given plenty of room at the original planting it may remain for half a dozen years at least, improving and increasing each year. Amateurs who grow this kind will do well to remember this and plant the bulbs fully 4 inches apart or rather more. This will permit of a good deal of increase, as the bulbs are small and the foliage thin and narrow.

These poeticus varieties are very distinct in their rooting, and appear to keep putting out new roots in succession for months together, as I have found roots of all lengths from June to April. The root fibres also, when lifted from the soil and fully exposed for weeks together, retain

their freshness and vitality. These kinds go to rest much more slowly than many others. Indeed, in some rainy seasons, and where they are not lifted, the foliage of the Poet's Narcissus is quite fresh long after the latest of the Ajax section have gone to rest. The double white-flowered kind, N. p. fl.-pl., or the Gardenia-scented Narcissus, is also worth notice. It has the same peculiarities as the type and the variety ornatus, but in many soils, and especially in southern counties, it is addicted to blindness. I am aware also that the failure is not wholly confined to the south, since inquiries and reports come to hand from a very wide and far-reaching area. This is a most regrettable fact, as in those soils and localities where its flowering may annually be depended upon it would prove a most profitable market kind. Three things are necessary to secure the best results, viz., deep planting, heavy soil, and letting alone for several years. I was interested during the present year to learn from a gentleman who had been taking a holiday in Scotland that quite near to the sea this double form was flowering grandly in large patches. To those whose homes are near the sea-coast this is worth remembering. And, judging from the size of the clumps as described to me, these must have stood for some years in the same position, which in any case I regard as essential. In many English nurseries the bulbs of this are grown to quite a large size, but the percentage of flowers that develop is very small. The Dutch-grown bulbs frequently are much worse, and can never be relied upon for flowering the first year after planting, and only a small proportion blooms the following year. In fact, its general vitality seems much impaired by the drying following the lifting. This matter, however, need not trouble the amateur beyond serving as a warning to lift and replant at lengthened intervals only.

The only other variety of special merit is N. poetarum, a most distinct and charming kind, that is more at home in soils moderately light and well drained than in those of the opposite extreme. This variety should always be included, even in the most select assortment, for the striking colour of the cup is always admired. E. J.

Trees and Shrubs.

THE VIBURNUMS.

We lately spoke of the value of the wild Guelder Rose (Viburnum Opulus) as an ornamental plant. But it is not more beautiful or valuable than many other species of this genus, which is represented in North America by several of the handsomest shrubs of our forest glades.

Viburnum Lentago and V. prunifolium, which often grow to the size of small trees, are beautiful with their lustrous leaves, their broad flat clusters of flowers and brilliant fruit, which in ripening changes from green to pink and then to a deep blue, berries of these three colours being often seen together in the same cluster. These are both hardy, fast-growing, vigorous and attractive plants, equally well suited to decorate a lawn or the margin of a wood.

V. cassinoides and V. nudum—the former from northern and the second from southern swamps—are as beautiful in cultivation as any shrubs we are acquainted with. They both have thick opaque lustrous leaves, large clusters of pale yellow flowers and fruit, which in ripening turns bright pink and then deep blue.

V. dentatum and V. molle are vigorous plants with large, coarsely serrate, lustrous, membranaceous leaves and small bright blue fruit, which does not turn pink in ripening.

V. acerifolium is a comparatively dwarf shrub with slender branches, three lobed and three-ribbed leaves, in form not unlike those of some varieties of the Scarlet Maple, small clusters of flowers and dark blue or nearly black fruit. From a garden point of view, its greatest value is found in its neat habit and the purple and dark red colours of its autumn foliage.

V. pubescens is a smaller and rarer plant than any of those we have already mentioned. It is distinguished for its excellent habit and the peculiar deep purple colour its leaves assume late in the autumn. This autumn colouring of the leaves is the chief attraction of this Viburnum, but this is so great that it should find a place in every collection. The most beautiful, perhaps, of all our Viburnums,

V. lantanoides (the Hobble-bush), is the only species that it is difficult to accustom to the conditions and surroundings of the garden. Like Viburnum Opulus, it produces large marginal, sterile white flowers surrounding the clusters of small fertile blossoms, but these sterile flowers are larger than those of the wild Guelder Rose, and the whole inflorescence is larger and more beautiful. The large rounded leaves of the Hobble-bush are very handsome, and those of no other plant assume a more brilliant scarlet colour in autumn. The fruit when ripening is bright red, but finally turns dark blue-black.

These are all species of Eastern America, common inhabitants of the forest and the borders of swamps, fields and highways; but in the Old World are several Viburnums that are hardly less beautiful than our American species.

Viburnum Lantana (the Wayfaring Tree), of Europe, is one of the best foreign shrubs that have been transplanted into our shrubberies. The foliage is bold, vigorous and richly coloured; the flowers are produced in profusion, and the fruit, which is black and lustrous when fully ripe, at one time in the summer is bright red. Japan has already contributed to our gardens

V. tomentosum, V. Sieboldi and V. dilatatum—all decorative plants of the first class; but in Japan are several other Viburnums which will probably prove as desirable ornaments to our gardens as any of these. Among them are

V. furcatum, the Japanese representative of our Hobble-bush, although a larger and more beautiful plant, common in the forests of Hokkaido, and the scarlet-fruited

V. Wrighti, a shrub which reminds Americans that their compatriot, Charles Wright, collected plants on the shores of Volcano Bay, as well as on the deserts of our south-western boundary.

Several other Asiatic species not yet introduced into our gardens may be expected to add variety and charm to northern shrubberies; but, considering only the common and well-known species, and taking them altogether, the Viburnums form perhaps the most satisfactory group of the deciduous-leaved shrubs of our northern gardens. They are perfectly hardy, easily raised from seed, easily transplanted, exceptionally free from disease and the attacks of insects, grow rapidly into shapely bushes, producing their flowers and fruit profusely, and in autumn the foliage of several species assumes brilliant colours. In planting a garden or park in the Northern States, if our choice of material was confined to the species of a single genus, we should not hesitate to select the Viburnums.—*Garden and Forest.*

Rhus Michauxi.—This extremely rare shrub was, according to the *Garden and Forest*, discovered at the end of the last century by the French botanist Michaux in western North Carolina, in what is now Mecklenburg County. Later it was found by Lyon in North Carolina in fruit, and in flower by Boikin, and by Le Conte in Georgia; and recently it has been rediscovered by Mr. W. W. Ashe, of the Geological Survey of North Carolina, at Farmington, Davie County, in western North Carolina; and by Mr. F. B. Boynton and Mr. F. L. Olmsted, Jr., it was introduced last summer into Mr. Vanderbilt's arboretum at Biltmore, whence it has been sent to the Arnold Arboretum. By Messrs. Boynton and Olmsted, who found three clumps of this plant with ripe fruit, Rhus Michauxi is described as a shrub with erect stems from 1 foot to 3 feet in height, spreading extensively by underground stolons. The leaves are deciduous, oval or oblong, dark dull green on the upper surface, pale on the lower surface, about 2½ inches long and 1½ inches wide. The panicles of flowers, which were collected by both Boikin and Le Conte, are terminal, about 6 inches long and nearly 3 inches broad. The fruit is nearly globose, about an eighth of an inch in diameter, bright scarlet, and clothed with close silky pubescence. The juices of Rhus Michauxi turn black in drying, like those of several of the poisonous species of Rhus, and Pursh, on the testimony of Lyon, who suffered seriously from it, and Torrey and Gray describe the plant as exceedingly poisonous, while Curtis denies its poisonous properties. From my limited experience with a partly dried specimen I am inclined to believe that it is the most poisonous of the North American species.

Garden Flora.

PLATE 1038.

GOLDEN-FLOWERED RICHARDIAS.

(with a coloured plate of R. pentlandi.*)

It is now half a dozen years since the first of these golden-flowered Richardias, or Callas, as they are generally called, bloomed in this country, but it was not seen in public till a year later, when under the name of R. Elliottiana it was in May, 1890, awarded a first-class certificate by the Royal Horticultural Society. Of this variety (Elliottiana) a coloured plate was given in The Garden, November 24, last year. Richardia Pentlandi, the form herein figured, is of more recent introduction, and was awarded a certificate by the R.H.S. two years later, viz, June, 1890. The leaves of this are as large as those of the common R. æthiopica, but thicker in texture and of a deeper green. The leaf-stalk is very different, being in R. Pentlandi suffused with red and mottled with green, brown, and white, after the manner of some of the Alocasias. The colour of the flower is a bright golden yellow, with a small blotch of crimson at the base of the interior. Both R. Pentlandi and R. Elliottiana are deciduous, and grow rapidly when they start in the spring, that is, if they are kept in a structure at an intermediate temperature or even at the cool end of the stove, for they both require more heat than is usually given to Richardias. This peculiarity is well explained by the conditions under which they grow naturally, for in the *Gardeners' Chronicle* for June 22 of the present year, Mr. Ayres, the well-known nurseryman of Cape Town, under the heading of "Richardia Pentlandi in its Native Habitat," writes thus:—

As I have recently introduced this variety into England, it may be of interest to those who possess plants to know a little about the manner in which it grows in the wild state. This variety is not found growing, like the old R. æthiopica, in large clumps in low-lying, swampy land, but occurs only in rocky mountainous districts as isolated specimens, and always close to large boulders. The tubers are always from 9 inches to 18 inches (more often the latter) deep in the soil, and whenever it is possible for them to do so, they get underneath the boulders. The soil is mostly a good loam, with a surfacing of leaf-mould and rotten wood. The only place in which I have found them is in what is known as the Low or Fever Country, which has a very hot and rainy

* Drawn for The Garden by E. Carter in the Royal Gardens, Kew, May 16, 1894. Lithographed and printed by Guillaume Severeyns.

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summer and a very mild, dry winter. This tuber, like that of the Caladium, loses all its fibrous roots annually.

R. Pentlandi is still an expensive plant to purchase, for though it can be readily increased, yet there is a considerable demand for it. However, now that its value is so generally recognised, it is likely to be well sought after in its native habitats, and if we have many such importations as the one sold last April at the London auction rooms, when 500 tubers were disposed of, it should soon become far more common. Though I have not seen any of this importation in flower, yet many growing plants have come under my notice, and as far as one can judge in the absence of blossoms, there is little, if any, doubt that the bulk of them consist of R. Pentlandi, with an occasional R Elliottiana amongst them. It now only remains to be added that R. Pentlandi was first flowered by Mr. R. Whyte, Pentland House, Lee, hence the specific name. R. Elliottiana, the other golden-flowered variety, has many points in common with the preceding; its leaf-stalks are mottled in much the same way, but the blade of the leaf is marked with a few white translucent spots, as in the older and better-known R. alba maculata. The flower of R. Pentlandi is of a rich golden, almost orange, yellow, but before decaying it turns greenish.

These two golden-flowered Richardias approach each other so closely, that it is difficult to say which is the more beautiful. The flowers of both are as large as those of the common white R. æthiopica, which accounts for their popularity, as small yellow, or rather yellowish-flowered species were known previously. R. hastata, which was introduced from Natal in 1857, is one of these, but its spathes are small and of a dull greenish yellow tint. R. melanoleuca and R. albo-maculata, with M. Deleuil's R. aurita (said to be a hybrid between R hastata and R. albo-maculata) complete the list of Richardias with yellowish blossoms.

All the species of Richardia were so exhaustively dealt with in The Garden, November 24, 1894 (when the coloured plate of R. Elliottiana was issued), that reference to the article in question will set at rest any doubtful point that may arise. H. P.

The Week's Work.

HARDY FRUITS.

The fruit store.—The work in this department will have been delayed later than usual on account of the late ripening of some varieties. Apple trees having in many localities been heavily cropped with fruit, more time than usual will have been taken in storing the crop. Many of the earliest varieties will now be out of the way and thus make room for later kinds. I fear fruit will not keep so well as usual, as the earlier kinds have decayed badly, many maturing before their time, doubtless owing to the drought and heat earlier in the season. It is advisable at this date to frequently look over the stored fruit, removing those decaying, as the least contact with sound fruit soon spoils the latter. Many shifts have to be made in storing when there is a heavy crop, but the latest kinds should get a suitable place, as though less showy than the earlier or mid-season varieties, they are very welcome at a time fruit of any kind is scarce. Dessert Apples of such kinds as Egremont and other Russets, the small Nonpareils, Cox's Orange, and similar good varieties should be as little exposed as possible to fluctuations of any kind, and if kept cool will keep much longer. The later cooking kinds may often be stored away from the kinds required for use up to Christmas. Any place frost-proof will be preferable to a warm room or close fruit store. In all cases it is well to store the late kinds as far apart from early or decaying kinds as possible. Some years ago I used to store all my late fruits, such as Northern Greening, Alfriston, and Hanwell Souring, in a dry, disused ice store, and never was short of good fruit. Pears are often gathered too early, and are soon spoiled after storing. Such kinds as Winter Nelis, Josephine de Malines, Easter Beurré, Nouvelle Fulvie, Beurré Rance, Olivier des Serres, and Bergamote d'Esperen all require late gathering and cool storage when placed indoors, and as they ripen brought into the ordinary store at the warmest end. In storing fruit of any kind it is well to place on clean wood racks on clean paper. Apples may be placed thicker than Pears and keep well in heaps, but straw should not be used, as it soon gets mouldy and causes the fruit to get tainted.

The planting season.—Though, so far, we have had but slight frosts, making the planting season later than usual on account of the leaves remaining longer on the trees, it is advisable to select early and plant this month if possible. I am a great advocate of early planting, especially in light gravelly soils, as the trees suffer less the following summer, and in clay land one can with advantage add to the ordinary soil and make it porous. One thing still lacking is moisture. Although in many places there have been heavy rainfalls, I find the soil very dry underneath large trees on walls and in sheltered places, so that in planting at this date it may be advisable to prepare the sites and allow them to be exposed for a short time, well saturating if found dry. In case the ground is not fit for the reception of the trees at the time they are received, they should be laid in carefully after unpacking, and may then be planted as soon afterwards as possible. If the weather is frosty it is not advisable to remove the packing, but to place the trees under cover or in a frost-proof building, this being preferable to placing in the soil in a frozen state. The roots of newly-lifted trees should not be exposed a moment longer than is necessary, as winds soon dry the fine fibrous roots. If received in a dry state it is well to immerse for a time in a tank before planting, and to syringe tender trees such as Peaches and Nectarines, as the wood of these soon shrivels if at all dry or much exposed. In planting, the grower must take into consideration the kind of soil, as newly-dug clay soil holds the moisture too freely and needs aid in the way of lighter materials to make it porous. The value of drainage must not be overlooked; plenty of brick rubble or, failing this, clinkers will do much good. I have seen many failures owing to want of drainage. Apricots, Peaches, and Nectarines delight in a well-drained soil, and though they require water in abundance from June to the end of August, they do not thrive if the water is stagnant at the roots. The holes for the trees should be at least 3 feet deep for young trees, and the drainage should be 2 feet or more below the surface, ashes or clinkers being freely used in heavy clay land. A hard trodden layer of ashes will check downward roots and give the trees the necessary drainage. Compost for planting may be prepared by mixing with the top soil of the border burnt garden refuse, wood ashes, and fine mortar rubble (road scrapings are excellent). Of course, where turf can be procured there is no better compost for young trees, but it is not always available. In planting in light soil, or that resting on gravel, the addition of heavy loam will be advantageous, and in some soils deficient of lime, an important factor for fruit trees, chalk and mortar rubble are valuable additions. It is well to plant young trees rather high, as with repeated mulchings, feeding, and top-dressing they will be quite deep enough, and high planting will save early root-pruning. Plant firmly, well spreading out the fibrous roots, packing underneath with good soil. Cut away any bruised or broken roots. With each layer of soil see that the fine roots are not twisted, but spread out evenly. Manure can be supplied from the surface in the shape of a mulch or winter dressing, also in the early summer, as a protection from drought. In heavy land, raised borders are advised for stone fruits. I find the trees do much better raised a few inches above the ordinary garden level. In lighter soils on gravel I do not advise the trees being planted above the ordinary ground level.

Stocks for fruit trees.—I am aware the question of stock on which the trees are worked is not always taken into account. It is important, as the growth is so much influenced by the stock. For instance, if we take the Paradise stock for dwarf trees, such as bushes, pyramids or cordon Apples, it should be borne in mind there is more than one kind of Paradise. I prefer the broad-leaved one of the many varieties on account of its greater vigour. Some kinds do much better on the Crab. Pears, like Apples, require consideration. The Quince stock is now much employed for dwarf trees, such as cordons, dwarfs, espaliers and pyramids, giving larger fruits and in quantity. For tall trees, standards, and in light gravel or chalk soils the Pear stock is selected. It is well when getting new varieties or forming new fruit plantations to consider the soil and the stock the trees are on.

Fruit-tree lifting.—I noted the importance of this work a few weeks ago, and will now only briefly allude to the subject, as the lifting of some trees will have been delayed, owing to fruits hanging or the leaves being green; there should be no further delay. This work is much best done as early in the autumn as possible. In some places the subsoil will be found quite dry. In such cases it is well to remove a portion of the surface soil and saturate with water a short time before lifting. Stone fruits are much improved by lifting, as stone-splitting, canker, mildew and barrenness show that the roots are not feeding upon the surface food given and need raising. Large trees that produce coarse wood may require two seasons to bring them round, doing one half of the tree each year. Trees growing into each other may with advantage get more space. If on walls there need be no loss of a crop by careful lifting at this season. Apricots and Cherries should get the earliest attention.

G. Wythes.

KITCHEN GARDEN.

General work.—This embraces a good deal at this period of the year, and in large establishments means a lot of labour, as the time left for carrying it out is but limited, wet and unfavourable weather being liable to set in at any moment. The Pea season being now over, all haulm and stakes must be cleared from the ground, the latter being tied up into bundles according to their length and stood erect in some out-of-the-way corner. As a rule, unless composed of Ash or Hornbeam, the bottoms decay the first season, and shortening has to be practised before using them again. Stakes that have been used for 4-feet Peas will come in useful next spring after shortening for such early varieties as William Hurst, Chelsea Gem, or indeed any of the favourite first early sorts. The same remarks apply to Bean stakes; and although these, by reason of being stouter at the base, often do a second season without shortening, any that have to be reduced will do next year for runners that are pinched instead of being allowed to go their full height, or even for supporting the newer climbing French Beans. Any stems of Autumn Giant or Walcheren Cauliflower from which the heads have been cut should be pulled up and thrown away at once, as damp, foggy weather quickly induces decay and a most offensive smell. This is especially needful where the mansion is close to the garden. In some places manure is difficult to obtain in sufficient quantities, and the most has to be made of opportunities. Where it consists entirely of strawy litter from the stables, it must be prepared before being wheeled into the garden. Turn it over at intervals of a fortnight, well soaking it with water as the work of turning proceeds; this will induce

decay. Such manure is far better for working into stiff retentive soils than thoroughly decomposed manure, as it lasts longer and tends to keep the soil in an open condition. For crops which do not rob the soil of much of its virtue, old Mushroom manure is not to be despised; indeed, if a percentage of some good fertiliser is added to it, the best of crops may be secured. A composition which is of immense benefit to old gardens where nothing but ordinary manure has been used for many years consists in the prunings of fruit trees, old vegetable refuse, the clearings of the potting sheds and similar materials, these being first burned and having added to them a sixth part of lime and the soil from old Vine or Peach borders. This makes a thorough change and its value is seen in the vigorous crops it produces the first season. Now is a good time to rectify all faulty drains, renew gravel walks and straighten edging tiles, which sometimes get out of place by the pressure from the garden roller or the foundation sinking. It is not wise to postpone this kind of work until frost and wet render the soil and gravel soft and sticky.

RIDGING AND TRENCHING.—It is useless to talk about this in some gardens at this time of year, as their small size renders it necessary to crop every inch in order to eke out the supply till spring; in fact, lack of space and convenience often make the work of calculating and planning for future crops more irksome than actually growing the crops themselves. However, as the various plots for different kinds of vegetables for next spring have in most gardens been decided upon, any vacant piece of ground, however small, should be got in readiness as opportunity offers, there being always more than enough pressing work in February and March, especially when a sharp winter suspends outdoor labour. Let the ground for Carrots be deeply cultivated, that is to say, where there is a sufficient depth of soil, but do not upon any account trench for the sake of trenching; rather keep what good soil there is in good heart and grow the intermediate forms of Carrot. The present is a good time for working in a good quantity of gaslime, as sufficient time will elapse between now and sowing for the harmful properties to vanish. This ingredient is undoubtedly the best eradicator of that worst of all Carrot pests, wireworm. Ground that has been dug two spits deep within the last three years will be best treated by merely ridging up the top spit. Mark out the ground at both ends, allowing spaces about 15 inches wide, after which fix the line and make a cavity the depth of the spade the whole length of the plot, and finally ridge up. As manure is not so easily buried as in the case of ordinary digging, the best way is to use none when ridging, and to use a fertiliser when the ground is again levelled down in spring. Ridging is more necessary in strong soil than on light, but experience proves that it is highly beneficial to both by pulverising and sweetening it. In preparing borders for early Potatoes, or for main crops of Carrots, Beetroot, or Parsnips, do not dig in manure, as this induces gross haulm at the expense of the tubers in the first-named vegetable, and coarse forked roots in the three latter. In cases, however, where these subjects have to be grown on the same ground two years running, which ought always to be avoided where possible, a little manure must of course be added.

LATE CELERY.—The latest-planted rows intended for blanching must now receive the final earthing up. If other work is pressing, it may be postponed on very light, well-drained soils for a fortnight longer. On strong soils, if the work is not done in fine, comparatively dry weather, repeated rains get the soil into a sticky condition, so that earthing is carried out under great disadvantages. Choose if possible a dry windy day for earthing up these late rows, as they very often prove of more service than those blanched earlier, so far as keeping is concerned, as, growth being slower and longer exposed to winds and the early autumn frosts, the stems stand the winter far better and do not rot in wet springs. Very late rows in shallow trenches will take no harm if not earthed up, so long as the tops are protected with Bracken or straw, should frost of intense severity set in. Should wintry weather prevail during the early part of November, it will be the wisest plan to take up a few score heads and lay them in soil in the root shed rather than have to use a pick-axe to remove the ridge soil and to thaw the Celery afterwards.

WINTER TOMATOES.—The present time is rather a critical one with the main batch of plants for mid-winter supplies, and without a good deal of attention the blooms are likely to fall off, not being properly fertilised. Just at this period many cultural errors are made, one of the most common being maintaining too high a temperature, especially at night. This produces a soft growth, the blossoms of which have not properly developed organs, and they either fail to set at all, or the fruit is malformed and inferior. At the same time the air of the house must be of a warm and rather dry character, say from 55° to 60° on warm nights, the former figure being sufficient during frost. Very little damping down will be needed, the moisture arising from the surface of the pots being sufficient to support both foliage and fruit. Admit air on all favourable days, close early, and let all watering and washing out be done early in the forenoon. Refrain from the use of stimulants, as the more slender and hard the stems are the better in every way. If plants have been raised for an extra early crop of fruit in spring, they will now need very careful treatment. While a strong growth is not advisable the plants must not be allowed to become pot-bound or starved. Plants in 4½-inch pots may when fairly filled with roots be shifted into 6-inch ones, the compost consisting of good holding loam and a little bone meal, ramming firmly and placing them near the glass in a temperature of 55°. These pots will carry them on to the new year, when they must be shifted into those 10 inches in diameter to fruit in.

WINTER SPINACH.—This important vegetable is a failure in many gardens this year, owing to the excessive drought of August and September. Especially is this so on light, porous soils. Where a good plant has been secured it will be worth almost any amount of trouble and care. If a good sprinkling of soot is given between the rows and the Dutch hoe afterwards used, it will not only assist growth, but also keep off the attacks of slugs. For a sowing in February next, the sooner the ground is got in readiness the better. Wireworm-infested soil should be treated exactly as advised for Carrots, except that a good quantity of manure must be dug in, as Spinach enjoys a rich and sustaining soil. Tolerably close pickings from beds now yielding are advisable, as they encourage the formation of young leaves during the early part of the winter. J. CRAWFORD.

KITCHEN GARDEN.

AUTUMN SUPPLY OF CAULIFLOWERS.

CAULIFLOWERS are not valued when we have an ample supply of Peas, Beans, and what may be termed other choice vegetables, neither are they palatable in hot weather. I think the value of this vegetable lies in its nice sized or even small heads, with white close curd and a large portion well covered by protecting leafage. This adds to flavour, an important point, as strongly flavoured vegetables are not inviting. I am writing from a private gardener's view. My comments as to size would not be applicable for market, but even with market supplies the tendency to huge heads is not so great as a few years ago. Cauliflower and Broccoli are so similar in appearance that the difference is scarcely perceptible. Of late many varieties have been added to both, and there is a wealth of material to select from. Though there have been many additions to both, the improvement is greater among the Cauliflowers, our winters being too severe for the Broccoli. So far we have not obtained what can be classed a hardy Broccoli, though doubtless considerable advance has been made in habit, and by this means the plants are better able to battle against our variable climate. Forty years ago there was no lack of varieties; no less than twenty-eight kinds are given as desirable and some of these are yet classed as standard varieties. The well-known Veitch's Autumn Giant heads the list for usefulness at this season, but it can be grown too coarse. Many advise sowing in heat early in the year, but it is not necessary if quality and not mere size is the chief consideration. If sown too early the heads in such seasons as this and 1893 are fit for use at the end of August and through September, when I do not think Cauliflowers are wanted. Of late years I have contrived to have the supply at this season, and it then fills up the void and makes good the loss of Marrows, Beans and Peas. There are also other advantages in having the supply at the end of September and through October. By sowing in the open in March, even in late localities, good material is secured by the date named if the plants are not allowed to become crowded in the seed beds, given ample space in their growing quarters and planted on an open exposed border. In light warm soils it is advisable to make two sowings, one early in March, another a month or so later; these will give a long autumn supply and provide heads till the early Broccoli turns in. I admit in cold districts an early sowing may be necessary. Many growers sow this useful variety in August for their early spring supplies, and it does grandly in dry seasons, standing when others bolt. In many country districts large quantities of this variety are grown for pickling, and many growers who sow for early supplies find it advantageous to tie up the heads, as when exposed in sunny weather they soon assume a pink tinge and are less valuable.

The Autumn Protecting Broccoli is a great gain and invaluable to the private grower, as he can keep up the supply without difficulty till Christmas. I am aware we cannot always depend upon open-air supplies until that date, but this variety lifts so well, and with the rudest shelter will give heads of nice size and quality. I have found unheated frames, turf pits, and even cellars most serviceable to eke out the supply, and have, in country districts with a large and varied supply to maintain through what is termed the hunting and shooting season, found this Broccoli more appreciated than at any other time. Those who have not storage room, as advised above, may make shift, and place in vineries, Peach houses or cases, or even sheds. Wherever stored, excess of moisture should be guarded against and all decaying leaves removed. The Protecting Broccoli sown in April and again in May will give a supply from October to January, and for December supplies late May sowings will be best. The old Cape Broccoli is still reliable for autumn use. At one time there were numerous varieties, the Purple being much grown, but these are none too hardy, and in my opinion are not so useful as the varieties named above. Snow's Winter White Broccoli for late autumn or early winter supplies cannot be relied upon like the Self-Protecting. At times well-grown plants fail to turn in, and if lifted before the heads are formed they do not make the progress one would desire.

G. WYTHES.

Young Carrots in winter.—Those who have a varied supply of vegetables to keep up through the winter will find young Carrots most acceptable. To get Carrots at the season named is not difficult, and they do not require much protection. I have used Bracken cut when green and dried in the sun. If cut when ripe, it soon breaks and decays. Of course, frames are preferable if they can be spared, and movable ones are most useful. I usually sow in August for the winter supply, sowing thinly on rich soil made firm. The season of growth being somewhat limited, the roots require every attention at the start. There are several good varieties for winter use, the Parisian Forcing doing well sown at the time named.

This is a small stump-rooted variety, with small top and almost round, of a bright red colour, and excellent quality. Early Nantes, a larger root, is superior to the Parisian Forcing. This variety is very sweet, having but little core, and is of fine quality. Sutton's Inimitable Forcing is likewise good, the roots small, globe-shaped, and the quality all that can be desired. It soon turns in, and keeps sound a long time. For winter use these three are all good, and when glass can be spared or even rough shelter, such as turf pits or thatched hurdles, given in severe weather, young Carrots may be had from November till April.—G. Wythes.

Potato Renown.—This is really one of the very best of the newly-introduced round Potatoes I know of. Were its qualities more widely known it would, I feel sure, be largely grown in fields for market as well as for private use. In shape it resembles that good old Potato, Schoolmaster, but it is even rounder and with fewer eyes. It crops wonderfully evenly, there being very few small tubers, and, so far as my experience of three seasons goes, it resists disease better than most varieties. The quality when cooked leaves nothing to be desired, and it keeps sound and good right into the spring months. Let those who are thinking of trying a fresh variety next year give Renown a trial. They will not, I think, be disappointed.—J. C.

A variegated Cabbage that we saw in the nurseries at Hexham shows a curious, and by no means ugly freak, for it is certainly as handsome in distinctive well-defined colour as are the variegated Kales. The seed when sown was said to be the result of crossing the red pickling with the ordinary green-leaved Cabbage, and there is proof of this in the reddish tint that pervades a few of the plants. Only one, however, is variegated, and this has white leaf veins on a light green ground, and a broad, regularly defined margin of pale yellow flushed with red, and quite an inch in width all round the leaf.

Late Potatoes growing out.—There is much complaint hereabouts among growers respecting the secondary growth in the tubers of late Potatoes, Magnum Bonum, The Bruce and Reading Giant being the greatest offenders. In many tubers the first growth has commenced to decay and the second is soft and not matured. That there will be a good deal of complaint respecting the cooking qualities later on may be taken for granted, and there must be a good deal of loss in decay and waste. The later growth in the tuber was deprived of its chance of maturing fully in the loss of the foliage and stalks, which seemed to give out very quickly. Many resolutions will be made in consequence of this failing, the offending ones being discarded and earlier maturing sorts substituted.—W. S., *Trowbridge.*

Secondary growth in Peas.—During September I was able to gather a good many dishes from rows which had given their crop much earlier in the summer, and naturally these were very acceptable when a larger demand than usual has to be met for the shooting season. In the ordinary course of events these Peas should have been cleared away, but noticing a new growth appearing a few days after the spell of summer drought had been broken by rain, they were intentionally left for the supply of some autumnal dishes, because those sown for successional use were badly crippled by mildew and the crop promised to be light.—W. S.

Rochford Market Cucumber.—I quite agree with the remarks of "G. W. S." (p. 258) with regard to the value of the above Cucumber, which I have grown for some years. By selection I have obtained a capital strain of it, which for productiveness and general utility will take a good deal of beating. For market use I suppose near London that no kind is grown so extensively as the above, and it is equally valuable for private work. The fruit is of such uniform size, combined with excellent colour, a strong point in the Rochford, that it is sure to take the eye of the buyer. It possesses general rotundity from the handle, which is exceedingly short and blunt, to the other extreme. Another decided advantage is that it remains fresh and plump much longer than any Cucumber I know. I hardly agree with "G. W. S." in saying "it is somewhat like Telegraph," for I regard it as most distinct from the latter. Telegraph always has a much longer handle, which runs up to a shoulder, and from this tapers to the point. It is also much paler in the skin, and when cut quickly becomes elastic. These points are against it on the market when in competition with the Rochford. If the latter is needed for exhibition it will vie with any; indeed I have grown it this season 23 inches long, straight as a dart, and that without any special care beyond the usual cultural routine. I formerly grew two houses of Telegraph (which, by the way, I knew prior to its being named) and several others of Rochford, but in the flats, as packed for market, the former spoiled the prime quality and colour of the latter; so much so, that I kept it separate, and eventually discarded it. I have this season a grand lot of seed fruits of Rochford, many of which are of large size.—E. J.

Cauliflower Eclipse.—A note of praise for this Cauliflower recently appeared in The Garden, and it certainly deserves it. It is now a good many years since Eclipse was introduced, and it is rather strange that it is not more universally grown, as for a Cauliflower to follow Early London, Walcheren and Pearl I know of none more suitable. It has a grand constitution and is not addicted to premature buttoning. If sown in autumn and protected in frames through the winter it will furnish good-sized white heads during July. If sown in spring in a cold frame or on a warm border, it comes to maturity at the same time as Autumn Giant, but does not grow to such a large size even on rich ground, this being an advantage rather than otherwise. Eclipse, being hardier than either Walcheren or Early London, is a very good sort for those who have no convenience for protection in winter. If sown on a warm border and covered in sharp weather with leaves or Bracken, the plants will survive if the winter is not too severe.—J. C.

Pickling Cabbages.—At page 259 Mr. Wythes speaks highly of the dwarf blood-red form of pickling Cabbage, and doubtless it is hard to beat. Another good and reliable form is Stocking's Giant Red. This is very quick in growth and good in colour, and if sown in spring and grown on without any check, will produce fine heads by autumn. Personally, I am not so much in favour of monstrous Cabbages for pickling, as they are invariably much coarser than medium-sized heads, the quality also being inferior. Plants raised in spring can be planted closely together, and they do not impoverish the soil to such an extent as the extra large Cabbages, which often draw all the stamina from the plot on which they are grown. Another advantage of spring-raised plants is that they are not so liable to split and rot as large coarse ones.—C. H. N.

Beans for seed.—Some time ago I advised saving seed both of the runner and dwarf varieties of Beans from second early sowings, as later rows did not, as a rule, ripen up the seed satisfactorily. The pods should now be collected and placed in flat baskets or boxes and removed to a dry, airy vinery or greenhouse, exposing them fully to the sun and turning them each day to hasten maturity. When thoroughly ripe, shell and store the seeds in muslin or even paper bags, and keep in a perfectly dry cool place. The least damp is ruinous to Bean seed.—J. C.

Tomato cuttings.—Where plants raised from cuttings are relied on for supplying ripe fruit, say in April, they should now be taken off. This, however, must not be thought of if the parent plants have been affected in the least degree by disease, or the probability is that the young stock will show it early in spring. Put five or six cuttings into a 4½-inch pot and place in gentle warmth, dewing them over with the syringe early on sunny afternoons for a time. When rooted place on a shelf near the glass in a temperature of 50° to winter them. In January these may again be topped and fresh cuttings inserted. To secure extra early fruit place the cuttings singly into small pots, and in spring repot, removing some of the lower leaves from the stems and coiling them round the pots. In this way additional roots are produced from the stems and the plants thereby strengthened. A 10-inch pot is large enough to fruit them in.

Small salad.—As the majority of the larger leaved Cresses will now be past, there will be an increased demand for Mustard and Cress, which must be brought on regularly in a gentle warmth. Sow weekly or once in ten days in shallow boxes, rough leaves being placed in the bottom and a fair surfacing of friable soil added, this being well firmed and the seed sown. Press this in with a piece of slate or board, and cover the boxes with stout brown paper or slates until the seedlings are an inch high. When almost ready for use remove to a cool house and give little water, as mould is very liable to attack it at this season.—C. H.

Shallots.—I am pleased to note that "A. D." (p. 216) prefers the true Shallot to the coarser red or large Jersey variety. "A. D.'s" remarks are opportune as regards shows, as I recently was judging a class for Shallots, and out of some twenty odd dishes there were only five of the true old variety, three of these excellent, but, of course, lacking the size of the Jersey variety. I knew which was best as regards keeping and for cooking or preserving, so awarded the prizes accordingly. I found that the judges the previous year had given all the awards to the Jersey, and the result was visible, as nearly all the exhibitors had gone in for this variety. When mere size is recognised by the judges at shows held under the auspices of the Royal Horticultural Society, we must do what we can to combat what appears to me to be a great evil.—S. H.

French Bean Sutton's Dwarf Forcing.—The season of forcing will soon come round, and it may be well to note the value of the above. I was much pleased with it last season. It is a great advance on some of the older kinds, being earlier and one of the most productive pot Beans I have grown. Good French Beans are valuable early in the year, and those who force hard I would ask to give a trial to the above. Sown at the end of the year, good dishes will be secured the second month in the year and in quantity. I have not grown it in the open or with protection for first crop, relying upon Mohawk and a seedling from the latter, but I should say Sutton's Forcing would do well and prove an acquisition for planting out when raised under glass. Being very dwarf it is readily protected, and when cooked is all that can be desired as regards flavour. I intend to give it a trial for first crop in the open, as Beans early in June are none too plentiful.—G. Wythes.

Winter Tomatoes.—The demand for Tomatoes seems to be less during the mid-winter months than was formerly the case. About six or seven years ago I could sell any quantity early in the new year at 2s. 6d. per lb., but, so far as I can learn, no one makes such prices at that season now, and even if they could be obtained, they do not pay, as the expenses are greater than the receipts. It is different in a private place where a few Tomatoes are required all the year round and the cost of production is not an object. Many small growers of Cucumbers are rooting out their plants, or have done so already, and some are filling their houses with large Tomato plants, thinking they will make a good thing out of them.—W. G. C.

The Globe Artichoke.—This delicious and favourite vegetable is easily grown. I think I have had the finest and most prolific lot of Globe Artichokes this year that I ever remember. As usual, last November I placed burnt ashes of garden refuse round the roots and over them light stable litter, which, on removal as usual in the spring, I thought had not sufficiently protected the plants against our unusual severe winter, for not a vestige of life was visible. However, after

the first showers of rain I applied some weak liquid manure, which speedily brought vegetation to light; and from the end of June (when I discontinued cutting Asparagus) until now, I have had an exceedingly heavy and fine crop, which will probably continue, as it did last year, till the middle of November, when the same process for next year will be adopted. The Globe Artichoke requires good feeding and also a strong soil, but the crowns should not be covered with heavy manure during winter, as this causes them to rot, especially with snow. Very light litter I have found to be the best protector. The prickly Globe Artichoke is the hardier and more prolific, but its flavour is far inferior to that of the smooth kind. The plants will last many years without removal if fairly well treated.—Gwent.

Large Beetroot.—These roots, as far as one can judge in a limited area, are not good this season, being overgrown and somewhat coarse. I do not like coarse roots, and would not advise storing them for late use. Place them on one side for early supplies, as they are much best used as soon as possible. It may be thought much of this coarseness is owing to early sowing, rich soil, or large kinds, but such is not the case with me. I did not sow till the first week in May, and in land that had not been recently manured. I think the season is to blame, for the first three months the roots made little progress. Then we had heavy rains, and with the earth in a warm state growth was rapid, and to this I attribute the overgrown roots. Fortunately, I rely upon the small Dell's Crimson for late supplies, and this is much larger than usual, but it will be acceptable and keep till the Turnip-rooted comes in. A late sowing of Turnip-rooted is useless, owing to the size of the roots. I find they also lack colour and are of poor quality when cooked.—G. W. S.

Stove and Greenhouse.

PLUMBAGO CAPENSIS.

Among the many climbing or shrubby plants that are used to adorn the pillars and rafters of glasshouses few are more beautiful than this Plumbago, of which an excellent example is shown in the accompanying illustration. It is as well adapted for the little greenhouse of an amateur as it is for a spacious conservatory, as when once established in its allotted space it will afterwards bear restriction with impunity. For pillars, such as that here shown, it is by far the best to plant out the specimen in a little border of prepared soil, consisting of two parts of sandy loam to one of peat made firm, and when in active growth and flower a watering once a week with manure water will be of assistance. In winter the plants can be pruned hard back to the leading shoots, and little water is needed during that season. In its particular shade of blue there are very few flowers that resemble this Plumbago. A coloured plate of it and its pure white variety was given in The Garden of April 21, 1888.

Mr. Chalmers, The Chestnuts, Cranbrook Road, Ilford, in whose garden the photograph from which the illustration was made was taken by Mr. E. Wright, of Forest Gate, writing of the plant says :—

> The plant, growing in a cool part of the greenhouse, was literally covered with flowers. About July it produced a grand mass of bloom from top to bottom. P. capensis alba mixed with the type makes a splendid combination.

Dracæna Massangeana is a very handsome greenhouse plant that we admired as grown under glass in Messrs. Fell's nursery at Hexham. It has beautiful leaves, each 16 inches long, 4 inches wide, and they arch gracefully at their tips. They are of a deep glossy green colour chiefly, as this shade forms two broad margins to the leaf, whilst down the centre are several strips of light yellow, which extend unbroken the full length of the leaf. A fact that adds to its decorative value is that it can be raised from seed and comes quite true.

Carnation Daybreak.—From the glowing description which accompanied the advent of this American variety a couple of seasons ago I had both looked for and hoped that we had something good to add to the list of really "pink" flowers. I was very much disappointed when the first flower opened to find it of a poor, washed-out colour, neither white nor blush, and most certainly not pink, and, worst of all, by artificial light the flowers appeared a dirty white. This was my experience in the latter part of the present summer. But now that the great heat has passed the flowers are assuming more colour, and the centre of the blossoms is a light rosy pink hue, gradually fading to a lighter shade at the extremities of the petals. It is, therefore, evidently not a good colour to stand strong sunlight. The flowers are of fairly good size and borne on stout stems, but so far as can be seen at present, it is the reverse of free flowering. The habit is vigorous—in fact, a little too much so, for it is these gross-growing kinds that are so quickly attacked by that dreaded fungus, Helminthosporium echinulatum. In low-lying districts and valleys this plays great havoc with many Carnations, and from its mode of growth it seems impossible to eradicate it. Both the upper and under surfaces of the leaves are attacked, and the only thing I have found to check it at all is a mixture of soft soap and sulphur. Damp a bit of sponge



Plumbago capensis. From a photograph sent by Mr. C. Chalmers, The Chestnuts, Ilford, E.

or soft rag in this, and with finger and thumb draw the leaf through. Dip the sponge frequently in the mixture. Where valuable kinds exist they are worth looking after.—E. J.

Stapelia gigantea.—In the stove house at Kew there is now a very fine specimen of this remarkable Stapelia in bloom. It has seventeen flowers on it either expanded or in bud, and is probably the finest plant hitherto seen in cultivation in this country. Each flower when spread out to the full extent is nearly 1 foot in diameter, the five segments of the corolla being broad at the base, but tapering to a long fine point, and giving the flower the shape of the conventional star. The whole of the flower—which is the largest of all the Stapelias—is hairy and of a light tawny yellow, this colour, however, being less in evidence than the numerous, irregularly forked and zigzag lines of dull red. Like many other species of Stapelia, the flowers have a disagreeable odour, which is, however, only perceptible at a distance when the sun is shining. The species has been in cultivation some twenty or thirty years, but the date of its introduction is uncertain. It is a native of Zululand and other parts of South Africa.

PROPAGATING TREE CARNATIONS.

Those who desire to secure an abundant supply of Carnation blossoms during the autumn months cannot do better than attend to the propagation of these plants at once. It too often happens that the early part of the year is usually recommended for their propagation. This is very well if only medium-sized plants are required, for which 5-inch or 6-inch pots are quite large enough. But where it is the aim to obtain plants of the largest size, that require pots 8 inches across, a start must be made in the autumn months. As a matter of fact, to secure plants capable of yielding from two to three dozen blooms each, the plants must be twelve months old or thereabouts. Moreover, the material obtainable in the autumn for propagating is very different from that procurable in the first three months of the year. In the former the cuttings have more or less been made in the summer and in the open air, while with the latter the cuttings have grown for the most part during the worst season of the year. It is obvious that the latter are not the most satisfactory cuttings, and without a good cutting to begin with it is impossible in future to build up a good plant. Again, during the winter months, heat, more or less, is indispensable to the plants flowering properly, and this will by no means prove of benefit to the young shoots. Under all the circumstances there is much in favour of autumn cuttings, and where these can be obtained, a few at least should be tried for comparison with later propagated stock. The latter, of course, will always be helpful for bringing up a succession of their flowers, and it is scarcely possible, even with the best types of Tree Carnations, to have too many of their flowers during the winter months. For autumn I prefer moderately firm cuttings, not too old or wiry. If possible secure the cuttings with a heel attached, as these root with greater certainty provided the heel is intact. Where the latter is broken, the cutting must be made to a joint. Very sandy soil in well-drained pots should be employed, making the soil rather firm. If the sand is quite dry, scatter a little on the surface of the soil, that it may follow the dibble into the hole and be in contact with the base of the cutting. Where the sand is quite moist, I prefer to use it mixed in the soil only. On the surface it dries so much more quickly than the soil below, and in this way is misleading, frequently causing water to be given when the soil in which the cuttings are is quite wet. Carnations often root well enough in pure sand, also cocoa-nut fibre, but in both these they are apt to lose all their roots in potting them off, otherwise it could be recommended. A close frame having a temperature of 60° to 65° will suit for striking the cuttings. In such a frame a thorough soaking of water must be given at the start, and afterwards with care. When the cuttings are rooted, no time should be lost in potting them off. On no account should they remain in the cutting pots till a mass of roots is formed, as the major portion will have to be sacrificed at the potting bench. When potted, keep the plants as cool as possible, and water sparingly all the winter. Under this treatment the young plants will be perfectly safe. H. H.

Winter-flowering plants.—To the list of good winter-flowering plants of easy cultivation given a few weeks ago in The Garden I may perhaps add one or two more, having found them very valuable at this season and right away until Christmas. Libonia penrhosiensis is a much better variety to my thinking than L. floribunda, being of more compact habit, brighter in colour, and lasting longer in flower. Cuttings may be inserted in early spring and the young plants transferred first to 2½-inch and ultimately to 3-inch pots, in which they may be allowed to flower. The final potting compost should consist mainly of loam, a sturdy compact growth being thereby encouraged. Nearly the same cultural remarks apply to Salvia splendens Bruanti, a very useful autumn flower, its brilliant scarlet hue being much appreciated alike for the greenhouse and for cutting. Its enemies are red spider and the white fly that troubles the Tomato grower. If there is any suspicion of danger from either of these the plants should be syringed with a weak insecticide before the flower-spike is fully formed. I noted last year the merits of The Lady Primula, and am glad to say this season's batch is progressing satisfactorily and already flowering well. It may not be a variety that a connoisseur in florists' flowers would be likely to favour, but as a cut-and-come-again winter flower it has few equals, and, despite the somewhat flimsy appearance of the petals, it stands well in a cut state. In the matter of winter-flowering Pelargoniums, I am holding fast by a few varieties that have proved about the best for continuous flowering, viz., F. V. Raspail, Guillion Mangilli, Constance and Queen of the Belgians, and for West Brighton Gem have substituted Turtle's Surprise, a double variety of very similar habit. A house filled with the plants above-named, together with a few Eupatoriums, Cypripedium insigne, and also occasional plants of winter-flowering Carnations, will, if kept up to a minimum of from 50° to 55°, be bright and cheerful nearly all through the autumn months.—E. B., *Claremont.*

BOUVARDIAS.

The exceptionally bright sunny weather which we have experienced during the autumn has been most favourable to Bouvardias. Those which have been flowering will keep up a succession of bloom much later than usual. This is especially the case with Humboldti corymbiflora. Plants which have been flowering since June will go on for a considerable time longer. It is a most useful variety for cut bloom. When given the same treatment as other sorts it does not always prove satisfactory, and I have known several instances where, although other sorts have flowered well, this has been almost an entire failure. Being of different habit and of stronger growth, it requires different treatment. In the first place, it should be given more pot room, and should not be stopped so late in the season as other sorts. For keeping up a succession of bloom through the summer and autumn, cut-back plants may be recommended in preference to spring-struck plants. As soon as the plants have done flowering they may be dried off and cut back. Plants kept well exposed to the light through the winter and in a cool house will break strongly early in the spring. As soon as they have made a good start they should be repotted. The balls may be reduced, and the plants potted again into the same sized pots, or perhaps a size smaller. The syringe should be used frequently, but it is necessary to be careful not to give too much water at the roots until the pots are well filled with roots. If the plants break out evenly, they may be grown on without any stopping, and will come into flower all the sooner. As soon as the plants are well established they should be exposed to all the sunlight they can get and plenty of ventilation given; in fact, this variety flowers well in the open, but the blooms are easily damaged by wind or rain. If treated liberally the same plants will keep up a succession of bloom from June until the end of October or even later. For winter flowering Vreelandi is the most reliable of the white varieties. A later addition to white varieties and one which makes a fine pot plant is jasminoides paniculata.

President Cleveland being so far ahead of all other scarlet varieties, it seems strange that other scarlets are still grown, yet such is the case. Of pink varieties, Mrs. Robert Green holds first place, though Priory Beauty is extensively grown. No recent additions have been made to the double varieties. Alfred Neuner (the first of the doubles) is still the best, or, I should say, the only white variety. Of scarlets there are several, but Hogarth flore-pleno is the only one worth growing. President Garfield, flesh-pink, will complete the list of useful double varieties. Under good treatment few plants are more useful than the Bouvardias. A. H.

Gloxinias.—These are frequently grown in a much higher temperature than is necessary, and with very unsatisfactory results. I lately saw a house full of young plants which had been grown under cool treatment. The plants in question were raised from seed sown early in February, and the last week in July the first flowers were opening. The pots were covered with large, fleshy leaves, and a little later on they will make a grand show of bloom. One great advantage in growing Gloxinias under cool treatment is that they last in bloom much longer, and the flowers when cut will keep better than those from a hot, moist atmosphere.—H.

Solanum Wendlandi.—For many weeks during the past summer this showy climber has been producing an almost endless profusion of its delicate mauve flowers in the succulent house at Kew. Indeed, in its flowering it appears almost continuous, judging by the branching manner of the drooping cymes in the plant under notice. Some of these pendulous branches of blossom were quite 18 inches long and nearly a foot wide. Though sometimes regarded as a stove shrub, that at Kew fully demonstrated, by its size as well as its abundant flowering, that it was quite content in cooler quarters. A coloured plate of this was given in The Garden of Feb. 1, 1890.

ORCHIDS.

SEASONABLE NOTES ON ORCHIDS.

The long-continued heat and sunshine have given place at last to more seasonable weather, and at the time of writing it is cheerless and dull outside, with a drizzling rain and fog. These conditions are about the worst possible for Orchids, and probably more failures may be attributed to our leaden autumn and wintry skies than to any other cause, as, no matter what care is taken in ventilation, damping and heating or other cultural operations, a nicely balanced temperature, with heat, air and moisture in proper proportions, cannot be maintained. Still, to take the season as a whole, it has been almost unparalleled for its beneficial effects upon horticulture and agriculture generally, and most of us can happily congratulate ourselves upon the good results attained in all departments. Orchid growers in the neighbourhood of large towns will find that for the next few months they have a difficult task before them, the heavy atmosphere bring-

ing with it all kinds of impurities. Near the metropolis it is possibly worse than anywhere else, though the black shiny deposit upon the glass near any of the large manufacturing centres makes Orchid growing in their vicinity anything but easy, and a complaint is already to hand from Manchester respecting it. The first thing needful is of course to clean the glass outside, and this is best done by washing with clean water, which will be necessary as often as twice or even three times a week during foggy weather, or the water may be forced through a hose and the soot swilled off by this means, but this is not so good a plan as the former, as the cold water is sometimes forced through the laps of the glass, causing a cold drip upon the plants beneath. The inside of the glass does not get coated over so quickly, but as often as time can be found to do so, this ought also to be cleaned, using a sponge and rinsing it frequently in clean water. In large houses the sponge may be tied on the end of a stick to prevent climbing about among the plants where the roof cannot be reached without, and with a little practice the work can be expeditiously done. In the cool house, where Masdevallias, Odontoglots and other cool Orchids are grown, this is especially needful, for although during the summer these can hardly be too heavily shaded, they require every ray of light that can be afforded them during the dark winter days. All the watering that is now needed at the roots is better done as early in the day as possible, as this allows the surplus water to dry up before nightfall. I always make it a practice to look through the plants daily for water even at the dullest time of year, but when possible water most heavily on bright mornings, and, it is hardly necessary to add, always use water of a corresponding or higher temperature than that of the house. If cold water is used the plants are being constantly checked, and this is quite as bad as allowing the temperature of the house to drop. The Phalænopsids have done remarkably well this season and the foliage is firm and healthy, in a capital condition, in short, to pass the winter safely if reasonable care is bestowed upon the plants. Keep them well up to the light and let the Moss about the roots get well on the dry side before giving a fresh supply of water. Plants in cylinders or baskets with the foliage hanging over the sides should not after this be immersed when watering, as it is very important that the leaves are not wetted; it is much better to pour the water on them from a can in the ordinary way, or, better still, to force it through the rose of a syringe, a mode of watering Orchids too little practised by the way. As the earlier plants of Calanthes, Pleiones, and other winter-flowering Orchids come into bloom the houses begin to look much more cheerful, and as these are soon followed by Dendrobiums, the dullest period of the year for flowers may now be said to have passed. The useful old Cypripedium insigne, too, in its many forms is again with us, and as the flowers last so long in perfection, this helps to make a display over a very long season. In the Cattleya house, C. labiata autumnalis is still the principal attraction, and where newly-imported plants are flowering for the first time, it is very interesting to note the variations in colour as the blossoms open. As regards the growth of the plants, a watchful eye must still be kept, for although most of the warm house kinds are more or less at rest, there are always a few that need watching at this time. Thunias should by now have lost all their foliage, and will therefore be kept quite dry at the roots. They must be kept fairly warm, and if room is carce the stems may be shaken out of the pots, tied up in bundles of five or six, keeping each kind separately labelled and hung up out of sight as much as possible in the East India or Cattleya house, or indeed in any structure where the temperature does not fall below 50° or 55°. Odontoglossum citrosmum has finished its growth and must now be placed in a cooler house, the water supply being diminished by degrees until midwinter, when no more will be required until the points of the flower-spikes are seen in the young growths in spring. The distichous-leaved section, too, of the Vanda and Aerides types are showing, by the tips of the roots clouding over, that they have finished growing for the season. It is never necessary to dry these plants so much as is done in some places; they do not require much water at the roots, it is true, but the atmosphere should always be a little moist to keep the foliage in good order. Saccolabium giganteum is a difficult plant to manage in winter, as the spikes are generally then produced, and consequently it requires more support than those that are entirely at rest. The flowers are, moreover, very apt to damp badly if the atmosphere is kept unduly moist, or if water is allowed to lodge about them. Suitable night temperatures will now be from 60° to 65° for the warmest house, according to the species that are grown, the higher temperature being the most suitable for Phalænopsids and kindred plants. For Cattleyas, 55° will be ample, while in the cool house the temperature should be kept as near 50° as possible. Continue to keep a sharp look out for insects in all the houses, and push forward the cleaning of the plants at every opportunity. H. R.

Vanda Sanderiana.—Numerous as are the fine species the genus Vanda contains, there is, perhaps, not one of them which in effectiveness can claim to be the equal of V. Sanderiana, although in pure beauty V. cœrulea and some others, perhaps, are superior to it. It was introduced by Messrs. Sander in 1881 from Mindanao, one of the Philippine Islands, and, for its size, one of the richest hunting grounds for the Orchid collector the world contains. Plants have been known under cultivation to produce a dozen flowers on a spike, but with even half that number the effect is extremely striking and handsome. The three upper segments of the flower are of a pale rosy lilac, tinged with yellow and marked with dots of crimson at the base. The two lower segments are considerably larger, measuring 2 inches across; the fawn-coloured ground is covered with a network of brownish crimson veins. The entire flower, which is flat, like a Miltonia, measures 4 inches to 5 inches in diameter. The lip is small and of a dull crimson, changing to greenish yellow at the base. A handsome specimen of this Vanda is flowering now at Kew.

Cypripedium Leeanum superbum.—This splendid variety is one of the largest forms of this variable hybrid, the dorsal sepal being almost wholly white. Originally raised by Messrs. Veitch, it has appeared in other places from the same cross, viz., a superior form of C. insigne and C. Spicerianum. It is a free-growing and easily-cultivated plant, thriving well under the ordinary routine as advised for warm house Cypripediums, and never failing to flower well during the late autumn and early winter months.

Comparettia coccinea.—The brightly-coloured flowers of this charming little Orchid are very acceptable at any time of year, and are especially so just now. It is by no means constant in flowering, the blossoms being sometimes produced in early spring. The flowers occur in small racemes from the top of the pseudo-bulbs just as the plants are finishing up their growths. It thrives well in small pans suspended near the roof in a warm house, and the plants greatly dislike disturbance at the roots; therefore, when repotting only the best of material should be used over good drainage. A little of the old compost may then be removed as often as required and new substituted. The plants require plenty of water all the year round, but especially when rooting freely, and they must be shaded from bright sunshine.

Odontoglossum aspersum.—This is occasionally imported along with O. Rossi, and is consequently sometimes met with under that name. It is, however, a much superior plant, the blooms being larger and brighter in colour, a well-flowered plant making a pretty display. The sepals are yellowish, with abundant brown spots, and the petals are nearly white, these having a few spots about the base. The lip is heart-shaped, white, with a yellow centre. O. aspersum thrives in a cool house in pots just large enough to take the plants easily. The compost may consist of equal parts of peat and chopped Sphagnum, using only a thin layer of this over good drainage. The plants usually commence to grow early in the new year, and, like all in the genus, must be carefully watered. The atmosphere must always be well charged with moisture and the roots never allowed to get really dry. The pseudo-bulbs will be finished up about the end of August or September, and a slight diminution of the atmospheric moisture is then an advantage. The little spikes soon after appear at the base of the pseudo-bulbs and quickly come to maturity. Its time of flowering varies a little according to its time of starting, but it is usually the late autumn or early winter months.

Camarotis purpurea.—In the rush for new and more showy Orchids, this old species is almost entirely neglected and it is very rarely seen. It is a bad plant to travel, as it often arrives more dead than alive, from which state it is difficult to bring it round. Many plants arrive in this country to be thrown away or to eke out only a very miserable existence. Probably trade collectors seldom trouble to bring it home, but I have several times received it from seafaring friends, who pick it up for next to nothing in the markets at Calcutta, it being brought there by the natives when in flower. It belongs to the distichous-leaved section, the foliage being small and narrow, forming a kind of creeping or twining stem as it is developed. The racemes are about 6 inches in length, very freely produced, and rather densely set with the pretty little rosy pink flowers. As mentioned above, the plants are rather difficult to start, but when once established they grow freely enough. They thrive well where plenty of heat and moisture is afforded them in baskets or pots in a compost consisting chiefly of Sphagnum and charcoal. When the growth is finished the plants must be rested by partially withholding water and slightly lowering the temperature. The flowers are produced successively during the summer, a single plant often keeping in flower for four months.

Cattleya labiata picta.—This is a deeply coloured and richly marked variety, the sepals and petals being broad and of good substance, and of a very warm rosy crimson. The lip has a deep velvety crimson blotch in front, the side lobes being lighter with two pure white blotches over the throat, the latter being deep yellow. The spikes are large, a plant now in flower with me having two, each bearing four flowers. The growth is more vigorous than that of some of the other varieties. Taken as a whole, the flowers very much resemble those of a fair C. Mendeli. —R.

Oncidium varicosum.—This is one of the showiest of all the Oncidiums and a beautiful Orchid. On well-grown plants the spikes are upwards of 20 inches in length, much branched and crowded with the bright yellow flowers. The lip of this species is large and broad, of the brightest yellow, the sepals and petals rather small. This plant must be strongly grown in order to make a good display, and the best mode of culture is perhaps to grow it in baskets suspended from the roof in the Cattleya house.

Three parts of Sphagnum Moss to one of peat fibre, with plenty of rough lumps of charcoal and potsherds, will grow it well, and the drainage must always be free and open. These immense panicles of flowers of course constitute a severe strain upon the plants, and unless they are really healthy and strong the spikes ought to be cut before they fade. O. varicosum requires an abundant supply of water at the roots while growing, and this must only be partially withheld after the flowers are past until the plants again commence to grow. It is a variable plant, the best by far of the varieties being O. v. Rogersi, which has really magnificent flowers, the lip being very broad and highly coloured.

Societies and Exhibitions.

ROYAL HORTICULTURAL SOCIETY.

October 29.

Of perceptibly less extent, but no less interesting, was the meeting held on the above date. Taking into account the severe frosts of the past few nights, it was not to be wondered at that some growers whose wont it is to exhibit plants of tender character were on this occasion somewhat cautious. Hence, no doubt there were fewer exhibits of Orchids than usual as plants. Chrysanthemums are now advancing rapidly; the plants and cut blooms shown at this meeting, if indicating what to expect during the next month, speak well for the season. A well-grown group, bearing flowers of fine quality, came from Messrs. Veitch and Sons. New kinds, chiefly of the Japanese section, were present in considerable numbers and from the best known exhibitors. A well-coloured set of dwarf Crotons came from the garden of Mr. S. F. Fisher, Streatham. An uncommon, but not new, bulbous plant was shown by Messrs. Wallace, of Colchester, under the name of Lycoris aurea, an introduction from China as far back as 1777, thus affording another instance of what really fine things we have which are not nearly well enough known. It is in the way of a Guernsey Lily, but is more nearly allied to the Amaryllis family, a synonym being A. aurea.

Of Orchids, Cattleya labiata again held sway, several really fine plants being shown, as well as cut flowers in astonishing variety. Hybrids, chiefly of Veitchian origin, were also present; for the finest of these, reference should be made to the list of awards. A small, but choice group came from Mr. Measures' collection, amongst which Oncidium ornithorrhynchum album was conspicuous, and from Mr. Statter some very fine forms of the queen of Cattleyas, C. aurea.

Of fruit, there was less than at the previous meeting, a very representative collection from Syon House by Mr. Wythes being the most noteworthy. Another good collection of vegetables was staged, some eighty vars., wherein the Cardoons and Carrots were the finest examples, the exhibitor on this occasion being Mr. Empson, of Ampthill. A very fine exhibit of Potatoes, consisting of varieties of the very highest quality, came from Messrs. Sutton and Sons, comprising varieties of the firm's introduction, including several not in commerce and of a distinct type from those usually grown. Messrs. Cannell and Sons also had a very fine display of Potatoes, which included the best kinds for garden and field culture, quality being a leading feature. Melons were still *en evidence*, being at the same time of excellent flavour for the lateness of the season.

Orchid Committee.

First-class certificates were awarded to—

Cattleya Mantini (C. Bowringiana × C. Dowiana), which at the meeting held on October 15 last received an award of merit when shown by Messrs. J. Veitch and Sons. A more vigorous example, evidently an older plant, was now sent from Mons. G. Mantin, Chateau de Bel-Air, Olivet, France, whilst cut blooms came from Messrs. Veitch and Sons, the same award being made to each exhibitor.

Cattleya aurea Johnsoniana.—A very remarkable and decidedly distinct form of this handsome species, in which the colouring of the sepals and petals showed the greatest diversity, being in this instance of a pale creamy tint with a rosy suffusion towards the extremities; the lip was unusually fine, a deep crimson-purple, the rich golden veins extending more nearly to the edge, which was beautifully crisped. From Mr. T. Statter, Stand Hall, Manchester.

Awards of merit were given to—

Cypripedium insigne Laura Kimball.—A very chaste and beautiful form of this popular species, much in the way of Sander's fine variety, but distinct from it, the absence of any spots being the same feature, the entire flower being of a deeper tint of golden yellow with the dorsal sepal relieved by a pure white margin. From Messrs. H. Low and Co., Upper Clapton.

Lælio-Cattleya Euphrosyne (C. Warscewiczi × Lælia pumila Dayana).—Another of the dwarf hybrids, of which some few fine forms have already been shown from the same source. The latter parent has monopolised the habit and the style of the flowers to a great extent, but the soft roseate tints of the sepals and petals point to its other parent, the lip being lighter in comparison, with deep vinous-purple markings and two distinct creamy blotches in the throat. From Messrs. J. Veitch and Sons.

Cattleya Eurydice (C. labiata × C. Acklandiæ).—A remarkably distinct hybrid, in which the size more nearly approaches that of the former parent with the wax-like substance of the latter, but devoid of the bars and spots as seen in its sepals and petals, which in the hybrid are of a pale fleshy pink with a few crimson-purple spots instead; the lip is of a velvety crimson-purple shading off to a paler tint, with a golden blotch in the centre. From Messrs. J. Veitch and Sons.

Cypripedium Allanianum superbum (C. Spicerianum × C. Curtisi).—A very fine hybrid, and one that is singularly intermediate in character. The dorsal sepal is that of C. Spicerianum in a most marked degree, the lip quite as much that of C. Curtisi, whilst the petals have the form of those of the former and the markings of those of the latter parent to a great extent. The combination in this instance has resulted in a singularly fine hybrid. From Mr. R. J. Measures' collection.

Cattleya Bowringiana gigantea.—A very superior variety of this handsome autumnal species, paler in colour perhaps than in some instances, but none the less beautiful. The petals were very noteworthy as being of great breadth, quite overlapping the sepals, the flower being of extra size; the lip, on the other hand, was perceptibly darker, with a creamy throat, the entire spike a very fine one. From Mr. Geo. Hardy, Timperley, Cheshire.

A botanical certificate was awarded to Houlletia tigrina, a dark spotted variety from Sir Trevor Lawrence's collection.

To Mr. T. Statter a silver Flora medal was awarded for some choice cut flowers of Cattleya aurea, very richly coloured. C. aurea magnifica was one of the finest of these, the labellum of unusual size and of most intense colour towards the margin. Several other good examples were shown. Cattleya labiata was also well represented, the flowers of extra size and of a wide range in colouring. One form named elegans has mottled or marbled flowers in dark and light shades of purplish mauve and crimson; another called Excelsior is of unusual size and very deeply coloured throughout. Cypripedium Spicerianum virescens in which the green predominates was shown here. C. Edwardi, one of the C. Fairrieanum type of hybrids, was also included. To Messrs. Hugh Low and Co. another silver Flora medal was awarded for a splendid group, consisting largely of Cattleya labiata, which is evidently one of the firm's specialites. The varieties of this splendid autumn Cattleya were a study in themselves. The plants being very vigorous, had thrown up some splendid spikes of large and richly marked flowers, whilst other plants were quite large masses. Cypripedium Charlesworthi was present, also being quite a specimen, the dorsal sepal as usual being its most attractive feature. Another form of this species called unicolor had the colour of the lip as seen in the type pervading the entire flower. C. Lowi, always attractive, was also included; so also were well-flowered examples of Oncidium varicosum and a nice plant of O. ornithorrhynchum album.

Mr. R. J. Measures, Cambridge Lodge, Camberwell, received a silver Banksian medal for a bright and choice group, amongst which was again shown the very fine plant of Oncidium ornithorrhynchum album freely flowered. Mr. Chapman is to be congratulated on his admirable management of this plant; on this occasion it bore fifteen spikes. Cymbidium longifolium (syn., C. cyperifolium) was also shown here, two examples being put up; it is after C. Traceyanum, but much smaller in all its parts. Cypripedium Annie Measures, bearing the third flower upon the spike, was staged in good condition; so also was C. Charles Rickman, which received a certificate under the name of C. Meteor; this had two flowers to the spike. C. Zeus (C. callosum × C. ciliolare), a fine and quite intermediate hybrid; also C. Leeanum superbum, specially good, were both included; so was the Cambridge Lodge variety of C. insigne, which has large spots on the dorsal sepal, and C. Arthurianum, which appears to flower at almost all seasons of the year. Cattleya Hardyana was well shown here, and so was C. labiata. One notable feature in this group was the many previously certificated plants. Mr. Hardy, Timperley, received the same award for a showy collection of cut flowers of Cattleya labiata of the greatest diversity, from the deep and richly coloured forms to that choice variety Cooksonæ which was certificated at the last meeting. C. labiata alba was also excellent; it has the purest of white sepals and petals, also the lip save the golden pencillings in the throat. Cattleya Harrisi (C. guttata Leopoldi × C. labiata var.) was also shown well; the flowers have the substance of Leopoldi with the form of lip, whilst the colouring and size partake more of those of its other parent.

Smaller exhibits comprised an extra fine truss of Cattleya labiata bearing five grand flowers, the colour being also very bright, from Mr. Wilberforce Bryant, Stoke Park, Slough. Messrs. J. Veitch and Sons showed in addition Cypripedium Bruno, a hybrid after C. Spicerianum, with the lip more obtuse, whilst the dorsal sepal was of extra size; C. Thora (C. insigne Chantini × C. politum), a distinct looking flower, pale bronzy red in colour with a broad creamy margin to the dorsal sepal; also Lælio-Cattleya Statteri (C. labiata × C. Perrini), a very choice and decidedly distinct hybrid, the sepals and petals after C. labiata and the labellum in the way of C. Perrini marked with rich violet-purple. Mr. Young, Sefton Park, Liverpool, had a malformed Cattleya labiata, also Cypripedium Clotho, a dark lustrous-looking hybrid. Messrs. Lewis and Co. showed Oncidium varicosum with large flowers, also Cattleya labiata, a distinct form, and C. aurea, as well as Cypripediums in variety with Phalænopsis Kimballiana.

From Messrs. Sander and Co. on this occasion came another well-flowered, healthy plant of Habenaria Susannæ, with four spikes of its pure white blossoms; Lælia marginata, a lovely dwarf species with pale rosy mauve sepals and petals, shading off at the edges to nearly white, the lip having a dark crimson blotch; Cattleya labiata in most excellent varieties, one of which had the labellum of unusual size, and another with rich golden shading in the throat; Sophronitis grandiflora, dwarf plants, with many flowers; Calanthe Clive, a dark red hybrid with a milky white blotch on the lip, and C. Florence (C. bella × C. Veitchi), a bright crimson-red, with the sepals darker and the flowers of good form. Oncidium Rogersi and O. tigrinum here were both excellent examples of these fine Oncidiums. Zygopetalum crinitum and Catasetum Christyanum were both to be seen. From Mr. G. C. Raphael, Englefield

Green, came a richly coloured spike of Vanda cœrulea called after the exhibitor, also Cattleya labiata, a dark form with large flowers, and Zygopetalum Burkei, which was certificated in 1883. From Mr. Wingfield's garden, Ampthill, came yet another variety of Cattleya labiata.

Floral Committee.

A first-class certificate was awarded to—

Lycoris aurea, which will be found noted on another page. A basket containing several plants each carrying a good spike of flowers was shown by Messrs. R. Wallace and Co., of Colchester.

Awards of merit were granted to the following—

Begonia Success.—This is another useful addition to the winter-flowering kinds, and is the result of crossing B. socotrana with a pink-flowered tuberous-rooted variety. It resembles the former parent in foliage, but its habit of growth partakes more of that of the tuberous-rooted kind. It grows erect, blooms very freely, its flowers deep rosy-carmine, of fine size, and exhibiting a tendency to doubleness, the centre of the flower being a mass of little petals. The arrangement of the flowers upon the stems too differs from, and is rather more irregula than that of, the tuberous varieties. It was shown by Messrs. J. Veitch and Sons, Chelsea.

Chrysanthemum Mrs. Briscoe-Ironside — A lovely Japanese incurved kind with long intermingled petals and a fine full flower of a tender blush colour, quite distinct from any other variety shown at the meeting. Raised and shown by Mr. H. Briscoe-Ironside, Burgess Hill, Sussex.

Chrysanthemum Miss Florence Lunn.—This is a reflexed kind, and has a full deep flower of a distinct rich shade of crimson-amaranth and of medium size. It was also raised and shown by Mr. H. Briscoe-Ironside.

Chrysanthemum Miss Dorothy Gibson.—This also belongs to the reflexed class, and has a large, deep flower, rather above medium size and of a telling rich yellow colour. It is an English seedling, raised and shown by Mr. R. Owen, Maidenhead.

Chrysanthemum Rose Owen.—An incurved variety, with a full flower of fine depth and perfect finish, in colour bright lilac-rose, lighter towards the centre, where the florets are tipped with white.

Chrysanthemum Edith Tabor.—A Japanese variety of reflexed form, large and bold in appearance, and in colour rich yellow, the petals long, broad, and somewhat intermingled. It was shown by Mr. R. C. Notcutt, Ipswich.

Chrysanthemum Mrs. Charles Blick.—Of white Japanese varieties there appears to be no end, and yet in this we have one of undoubted merit, as dwarf and robust in habit as it is fine in flower. Thirteen plants of it were shown, none of them more than a yard high, but each crowned with a grand flower, made up of a deep, dense, but graceful spreading mass of long florets, which incurve slightly at their tips. It is of the purest snow-white, and was shown by Mr. C. Blick, gardener to Mr. Martin R. Smith.

Chrysanthemum Queen of Buffs.—A distinct Japanese kind, of the colour that its name suggests, the outer flowers recurving somewhat, those of the centre incurved, the petals of ample breadth and slightly flushed with rose along their edges. Shown by Mr. H. J. Jones, Lewisham.

Chrysanthemum Mrs. E. G. Whittle.—This is a Japanese incurved, with large flowers, broad in petal, bold in outline, and of a pretty cream-white shade. Also from Mr. H. J. Jones.

Chrysanthemum C. H. Curtis.—This is an incurved variety, extra large for its class, and lacking somewhat the perfect finish usually sought for in flowers of this class, but in its rich colour it is an acquisition. It was shown by Mr. H. J. Jones.

Chrysanthemum Miss Annie Holden.—A single-flowered variety, but a welcome addition to this class, deserving a place among the best of them. It bears its flowers freely in sprays and they are of a distinct shade of fawn-yellow, a clear and decided tint. It also came from Mr. H. J. Jones.

Chrysanthemum Beauty of Teignmouth.—This is a Japanese variety of the E. Molyneux type, with large flowers, broad in the petal and extremely showy. The inside of the florets is a rich crimson, but their reverse is white, lined and flushed with rose; the outer ones droop, but those of the centre incurve. It was shown by Mr. J. Agate, Havant.

Chrysanthemum Mons. Chenon de Leche.—This is one of M. Calvat's fine kinds, a Japanese reflexed, the flower full, very fine, and of a colour not easily described—a sort of rosy buff, soft and distinct in appearance. Shown by Mr. W. Wells, Redhill.

Chrysanthemum Yellow Source d'Or.—This is what the name suggests, and of a rich, almost orange-yellow shade, but it would be better in many ways to give a distinct kind an entirely new name, even though it be a sport. It was shown by Messrs. Cannell and Sons.

There was little else for the consideration of the floral committee but Chrysanthemums, and these were mainly varieties shown for certificates; but from Messrs. J. Veitch and Sons, Chelsea, came an admirably arranged group of plants mostly of Japanese kinds, and each carrying from three to five fine blooms. Among the numerous varieties here shown, the following were particularly fine: Mrs. W. H. Lees, white; Mme. Carnot, white; Mons. Ch. Molin, bronze and yellow; Louise, white; William Seward, crimson; John Shrimpton, rich crimson; International, pale cream; Eva Knowles, rich apricot; Charles Davis, yellow; Miss L. D. Black, rich yellow; Sunflower, yellow; Queen of Buffs, Col. W. B. Smith, Mons. G. Biron, G. W. Childs and G. C. Schwabe. A silver Flora medal was awarded this fine group, which well represented the newest and best kinds at present obtainable. A brightly coloured group of Crotons was exhibited by Mr. G. Bond, gardener to Mr. S. T. Fisher, The Grove, Streatham, the plants all being in 4½-inch pots. Many varieties were shown and the condition of the plants showed skilful culture. A silver Banksian medal was awarded. Mr. Anthony Waterer, of Woking, exhibited a large tree about fifteen years old and nearly 20 feet high of Quercus americana coccinea splendens, of which every leaf was of a bright vermilion-red, as vivid as that of the Liquidambar in its brightest colour, but markedly superior in other ways, for whereas the Liquidambar loses its leaves early, those of this Oak hang persistently, and lose little of their brightness till nearly Christmas. Mr. W. Wells, of Redhill, showed several fine novelties in Chrysanthemums, as Reine d'Angleterre, rosy mauve with silvery white reverse; Mons. H. J. Jones, rosy red with amber reverse, and Mme. Aug. Gache, white, spotted and flushed with pink, a distinct flower in form and colour. Messrs. B. S. Williams and Son, Holloway, showed the variety Reine d'Angleterre and a variegated red-flowered Bouvardia. Chrysanthemum Fulwell Park, shown by the Dowager Lady Freake, is a distinct sport from La Triomphante. Messrs. Cannell showed Kentish White, which strongly resembles Louise, Source d'Or and two sports from it, Miss A. Holden, the pretty single kind, and several others, notably two pompons with thread-like petals. Miss Elsie Teichmann and Maggie Shea, both very fine Japanese kinds, were shown by Mr. C. E. Shea, the former cream white, and the latter rich yellow. Miss Bostock, shown by Mr. R. C. Notcutt, is distinct, with long, narrow, erect petals, its colour rosy-lilac. Mr. H. J. Jones had several superb varieties besides those already described, in James Murray, D. B. Crane, and Mme. Moulin. Mr. R. Owen, Maidenhead, Mr. W. E. Tidy, Havant, Mr. Stevens, Putney, and others also exhibited new varieties that do not call for special comment. Mr. H. Briscoe-Ironside arranged and showed revolving stands made for six and twelve blooms respectively, apparently designed to improve upon the existing showboard method of arrangement. Several other varieties of Begonia of the same cross as that which received an award were shown by Messrs. Veitch, embracing different shades of colour, and cut flowers of Lilium nepalense were shown by Messrs. R. Wallace and Co., Colchester.

Fruit Committee.

The exhibits before this committee were numerous, vegetables and salads being shown in quantity and of excellent quality.

Awards of merit were given to—

Melon Anthony's Favourite. — A scarlet-fleshed, netted, roundish fruit of good flavour for so late in the season. It is of medium size and with a good depth of flesh. From Mr. Empson, Ampthill House, Bedford.

Apple Pay the Rent.—A late variety, above medium size, roundish, similar to Wellington, but may be used for kitchen or dessert. From Mr. R. Fenn, Sulhamstead, Reading.

An extensive collection of vegetables occupying much space with forty varieties of Gourds was staged by Mr. Empson, Ampthill House, Bedford. He had very fine Carrots in eight varieties, Matchless and Perfection being the best; good Veitch's Protecting Broccoli, Major Clarke's and Solid White Celeries, Chirk Castle, Orange Jelly, and Milan Turnips, good Tomatoes, Beet in three varieties, Ailsa Craig Onions, eighteen varieties of Potatoes, Cardoons, Salsafy, Brussels Sprouts, and Lettuces (silver-gilt Knightian medal). Messrs. Sutton and Sons, Reading, had an extensive display of Potatoes, over thirty-one varieties being of their own introduction, including the well-known Magnum Bonum, still one of the most profitable croppers grown, Supreme, Windsor Castle, Flourball, a new variety of great excellence sent out last year, Satisfaction, Triumph, Abundance, and Ringleader, all noted for their shapely tubers and excellent quality. A large collection of seedling Potatoes not yet in commerce, from which great things may be expected, was also shown. The whole formed a very interesting display (silver Knightian medal). Messrs. Cannell and Sons, Swanley, Kent, staged 100 dishes of Potatoes, also Leeks, Turnips, and Coleworts in quantity. The best Potatoes were Mr. Bresee, Beauty of Hebron, Early Vermont, King of the Russets, and Eynsford Mammoth. Several new and promising seedlings were also included (silver Knightian medal). Mr. G. Wythes, Syon House, Brentford, staged a nice collection of salad in twenty-six varieties, including Endive, beautifully blanched and of excellent quality; Early Rose and Superb White Celeries, Radishes in variety, Sorrel, Chicory, Paris Green, Hick's Cos and Harbinger Lettuces, four varieties of Tomatoes and Cucumbers (silver Banksian medal). From the same exhibitor came a collection of eighty dishes of Apples, Pears, Plums and Quinces. Cox's Orange, Ribston, King of the Pippins, Royal Russet, Brownlees' and Egremont Russets were of excellent quality. Among the cooking varieties, Bismarck, Cellini, Tower of Glamis, Alfriston, Hawthornden and Warner's King were good; Beurré Diel, Nouvelle Fulvie, Brown Beurré, Pitmaston, Beurré Clairgeau and Van Mons Leon Leclerc being the best Pears. A nice lot of Wyedale Plum was also shown here (silver Banksian medal). Messrs. D. and W. Buchanan, Forth Vineyard, Kippen, Stirling, staged a very interesting collection of fruit and Tomatoes, the Grapes being arranged with highly-coloured foliage and suspended to wires. There were very fine bunches of Gros Colman in baskets, also Alnwick Seedling. The whole formed an interesting display (silver Banksian medal). Mr. C. E. Shea, Foot's Cray, Kent, sent very fine baskets of Gascoigne's Scarlet Apple, splendidly coloured, and two dishes of Medlars. Mr. R. Fenn, Sulhamstead, sent seedling Potatoes in two varieties. Mr. Wythes sent good examples of Celeriac, or Turnip-rooted Celery. Mr. O. Thomas sent seedling Melons The Duchess and Frogmore, but not in condition. Mr. A. Waterer had a nice-looking Apple named Sanspareil. Mr. Fenn sent a seedling Apple besides the one mentioned above.

The lecture given by Mr. Arthur W. Sutton on Potatoes was listened to by a large audience,

and it was made additionally interesting owing to the large number of lantern slides used to illustrate the lecturer's remarks. He traced the history of the Potato down from its earliest days, when it was looked upon as a luxury, till the early part of the present century, when its importance as an edible tuber became better known, and interesting statistics were given of the acreage of land now devoted to Potatoes, and the average yield in tons in Great Britain, France, and Germany. The details of cross-fertilisation and seed-raising were minutely explained. In reference to Solanum Maglia, which grows in swampy places, it was thought it might, by intercrossing with S. tuberosum, be a means of obtaining varieties less susceptible to disease in wet seasons. The lecturer mentioned that, although many hundreds of flowers were artificially fertilised, only five seed berries were obtained and from these only two seedlings were raised. After growing the progeny several years, the crop was last year almost entirely lost by disease. Still without the intervention of this species we now had disease-resisters, a series of pictures of which were thrown upon the screen, the lecturer remarking that Flourball did not last year have a single diseased tuber. As regards the spraying for disease, he was of opinion, based upon experiments, that it was only necessary for the late kinds that were likely to be affected by disease before the growth of their tubers was complete, and it certainly paid to do it in regard to these. He concluded by telling and showing the results of a curious cross experiment by grafting the Tomato on to the Potato, and *vice versâ*. This experiment is to be further continued by sowing the seeds which the respective plants have ripened.

NATIONAL CHRYSANTHEMUM SOCIETY.

A meeting of the general committee was held at Anderton's Hotel, Fleet Street, on Monday evening last, when Mr. Wynne occupied the chair. The secretary announced that prize-money amounting to £45 10s., and awarded at the recent October show at the Royal Aquarium, had been paid to the exhibitors and that the following medals had been awarded for miscellaneous contributions to the show: Silver-gilt medals to Messrs. J. Laing and Sons, H. Deverill, H. Berwick, H. J. Jones, J. Cheal and Sons, T. S. Ware and H. Cannell and Sons; silver medals to Messrs. W. Spooner and Sons, Veitch and Sons, Dobbie and Co.; small silver medals to Messrs. Godfrey, Cutbush and Son, and W. Wells; bronze medals to Messrs. Such, Tidy and H. Shoesmith. These awards having been made by the arbitration committee were confirmed. A motion was then made requesting the secretary to call attention to the bad lighting in the early part of the evening at the last exhibition of the society, and to point out the necessity of the Aquarium authorities providing a better illumination during the November show.

A great deal of attention was given to the consideration of the society's jubilee celebration next year and discussion and acceptance of special prizes.

The jubilee celebration will take the form of—1. An immense exhibition of Chrysanthemums in London on November 3, 4, 5 and 6, 1896, in which all types of the flower will be fully represented, also of fruit, vegetables, &c., and which will extend over four days, with a further competition and an entire reconstruction of the exhibition on the third day. 2. A grand opening ceremony and private view at noon on the first day. 3. A conference of Chrysanthemum growers and raisers from all parts of the world. 4. A jubilee banquet at the Hotel Metropole and other festive gatherings. 5. The striking of jubilee medals of value for competition, and for rewarding such persons as have rendered conspicuous service in promoting the advancement, cultivation and improvement of the Chrysanthemum. 6. The preparation and publication of an exhaustive jubilee catalogue of Chrysanthemums, with the most complete classification. The committee will be happy to receive offers of special prizes from those in sympathy with the jubilee celebration.

A special prize fund (£1000) will be opened, and it is hoped that growers in all parts of the country interested in the flower will do their utmost to raise the required amount. It was also resolved that, following the precedent set in 1890 on the occasion of the Chrysanthemum centenary fête, a special bronze jubilee medal be placed at the disposal of every affiliated society for competition at their local shows in 1896. The schedule of special jubilee classes was then passed, and will be issued to the public shortly. It was resolved that the floral committee be invited to the judges' luncheon on the occasion of the December show, when it is proposed to consider and revise, if necessary, the existing regulations concerning the awarding of certificates. The society's annual dinner will take place on Wednesday, November 27, when the president, Sir Edwin Saunders, will occupy the chair. Mr. G. Gordon called attention to the proposed issue of a new jubilee official catalogue, and suggested that experts in various parts of the country should be called upon, as in 1888, to elect what varieties should be included in the new edition. In reply, it was stated that the catalogue committee would hold a meeting that evening and present its report in due course.

On Wednesday last a meeting of the floral committee of this society was held at the Royal Aquarium, Westminster, Mr. T. Bevan presiding. There was a good display of novelties submitted for adjudication, although perhaps somewhat smaller in extent than might have been expected. The following were the principal contributors to the meeting: Monsieur Ernest Calvat, Messrs. H. Cannell and Sons, Mr. H. J. Jones, Mr. C. E. Shea, Mr. W. Seward, Mr. R. Owen, and Mr. H. Briscoe-Ironside. The selection was a remarkably rigid one, and first-class certificates were awarded as below:—

Chrysanthemum Yellow Source d'Or.—Japanese; a fine golden yellow sport from the old Source d'Or, a well-known decorative variety. Staged by Messrs. H. Cannell and Sons.

Chrysanthemum Kentish White.—A Japanese incurved of good build, being solid and substantial, with grooved florets of medium width. Colour creamy white, centre faintly tinted yellow. Also shown by Messrs. H. Cannell and Sons.

Chrysanthemum Australian Gold.—A prodigious Japanese, very full and double. Colour rich canary-yellow, tinted lemon, reverse silvery yellow. A seedling, raised by M. Ernest Calvat, who was also the exhibitor.

Chrysanthemum Mrs. Briscoe-Ironside.—A large Japanese incurved, very globular in form, with regularly incurving florets. Colour soft salmon-blush. Raised and exhibited by Mr. H. Briscoe-Ironside.

Among other meritorious novelties mention may be made of Mrs. E. Seward, large incurved Japanese, pale carmine, with golden buff reverse and Master Jas. Epps, a massive-looking Japanese, rich golden yellow, which the committee desire to see again. M. de la Rocheterie, Japanese incurved, inside colour pale carmine-chestnut, reverse yellowish buff, was also good. Several incurved varieties of the old show type were staged, viz., Mr. Jas. Murray, George Haigh, an excellent golden buff sport from Robt. Petfield, and Rose Owen. Other Japanese varieties that look promising were Duchess of Fife, white, Miss Clara Walker, white, Queen of Buffs, Ada Fulford, Mrs. J. G. Whildin, fine yellow, Maggie Shea, and Lord of Lorne.

The plague of birds.—If Mr. Sangwin will refer back to p. 152 of your present volume he will find that as long ago as the middle of August I was complaining of these feathered pests, and ascribing the cause to our ridiculous latter-day legislation. Only yesterday (October 29) I gathered two trees of Dumelow's Seedling, and nearly half the crop was damaged by birds and wasps—these latter being this season more destructive than ever before—their depredations lasting until the middle of October, a later date than I can recollect. Curiously enough, I have found starlings the most destructive birds among fruit this summer. I had previously reckoned them as the gardener's friends.—An Oxfordshire Amateur.

Notes of the Week.

Lycaste armeniaca was imported with and is no doubt a variety of Lycaste Skinneri. It differs principally in the colouring. The sepals are creamy white, the petals and lip bright salmon. A fine plant of this scarce variety is now in flower in Messrs. F. Sander and Co.'s nursery.

Nottingham Medlar.—I send you a Medlar from one of the trees in my garden. There are many more as large. I never remember such fine crops of Medlars and Quinces; the latter are a splendid sight, the great golden fruit hanging in ropes. One cause of these fine crops is doubtless the entire absence of frost from the time the Medlars and Quinces began to flower.—Wm. Wickham, *Binsted Wyck, Alton, Hants.*

Erodium supracinereum.—I see this plant mentioned in The Garden of October 12. One planted here last November had no protection during the winter and has flowered very freely from the end of May to the middle of October. I sent some seed pods to Mr. J. Wood, from whom I obtained the plant. I should be glad to know whether E. supracinereum is the equivalent of supracanum of the Kew hand-list of herbaceous plants.—E. C. Buxton, *Bettws-y-Coed.*

Iris unguicularis (stylosa) has already commenced flowering at Kew, perhaps in consequence of the unusual heat. It does very well in a narrow border against the wall of the Orchid house, and there were several of its lovely mauve-blue, sweet scented flowers fully expanded on long stems thrown well above the tufts of grassy leaves. It is a precious winter flower in its normal season, and worthy of as much attention as I. reticulata in its several fine forms.

Dahlia Mrs. Peart.—Replying to "C. W.'s" query on page 325, we had this early in the season quite double and without a trace of the yellow centre. Amongst the flowers exhibited by us at Shrewsbury were two model blooms, and a month ago we had two plants in pots, each carrying blooms without the yellow centre, in fact as double as any others we were showing at the same time. Several who saw them said they were the finest and most perfect blooms they had ever seen of this variety. We might, however, add that as the season advanced the flowers showed more and more of the centre, till the last few had only two or three rows of petals.—Pope & Sons, *Birmingham.*

A fine Lobelia.—I am sending for your inspection and opinion a spike of bloom and foliage of a seedling Lobelia which I have grown largely for the past two seasons. It is the hardiest of all this class, being a robust grower and rooting deeply. It stands the winter. You will observe the peculiar green of its stems and foliage. It remains in full beauty much longer than any other Lobelia. Last autumn it was beautiful on November 24, and has all the appearance of continuing as late this season. It is a seedling from my Lobelia Firefly.—Andrew Campbell, *The Gardens, St. Anne's, Clontarf, Co. Dublin.*

*** A very tall (5 feet) and handsome Lobelia, partaking more of L. cardinalis than L. fulgens. —Ed.

Nymphæa cœrulea out of doors in Sussex.—I have for several years flowered Nymphæa cœrulea in a small tank in my Orchid house, and as the Lilies outgrew the tank, I put one in a pot into a pond lately excavated in a wood at a depth of about 18 inches. This was done in the summer of 1894. It was knocked out of the pot in the

spring. To my astonishment it lived all through the severe cold of last winter, and though it has not fully flowered, yet it has budded sufficiently to show that in a more sunny spot it might come to perfection. I enclose two of the buds. Arums also which were placed in the same pond in 1894 survived the winter and flowered this summer. Are not both these cases unusual?—G. H. THURLOW, *Buckham Hill, Uckfield, Sussex.*

Arachnanthe (Vanda) Lowi.—This species was first discovered by Sir Hugh Low in Borneo and sent to the Clapton nursery about 1846. A grand specimen with eight growths carrying four racemes, with an average of upwards of thirty flowers on each, is now in flower in Messrs. Sander and Co.'s nursery at St. Albans. The two lower flowers on each raceme are, as is usual with this species, rather larger than the others and of a bright orange-yellow dotted with reddish purple, while the others are deep chocolate-brown bordered and streaked with yellow. The plant thrives best in pots with broken crocks worked firmly between the roots and around the stem. The surface should be made up with good live Sphagnum Moss. It requires plenty of moisture the whole year through.

The Cornish Heath (Erica vagans).—This Heath is valuable for the late autumn days, and we are surprised not to see it more frequently in gardens. Quite recently at Cragside, in the heart of Northumberland, and in Jesmond Dene, Newcastle, we have seen glorious groups of this Heath fine in effect at a time when most gardens or garden shrubberies are bare of bloom. The past winter dealt hardly with some of the South European Heaths, but, after all, it only accentuated the importance of the absolutely hardy and most beautiful kinds. E. carnea spread out its gay cushions of colour immediately the cold had passed away, and now we have the Cornish Heath (as is its wont) carrying on the time of Heath-blooming till the buds of E. carnea show colour again. In the whole family of hardy Heaths none are more graceful than this, with its long, tapering, plumy shoots crowded with myriads of blossoms. At Kew this Heath is now also very pretty.

Lycoris aurea is a charming bulb for flowering during the late autumn months, and now that its cultural requirements are better understood it will doubtless become popular. It has been very good at Kew this season, and at the Drill Hall on Tuesday Messrs. R. Wallace and Co., of Colchester, showed a basket of flowering plants, and received a first-class certificate for it, an award that the plant well deserved. In general appearance it is intermediate between an Amaryllis and a Nerine, with the bold scape of the former and the prettily crimpled or undulated petals of the latter flower. In its rich shade of apricot-yellow, however, it is unique. A coloured plate of it was given in THE GARDEN for January 19 of this year. To be successful in the culture of this Lycoris, it must be grown in a warm greenhouse, whilst a curious fact in regard to its habit in its native country (China) is that it rests entirely throughout the wet period, with the temperature at 85° and a rainfall of about 100 inches, bursting into flower with the advent of cooler days.

Pleroma macranthum is a most useful and showy late-flowering plant for the conservatory or warm greenhouse, and the way in which it grows and flowers in the greenhouse at Kew clearly shows that it does not require nearly so much heat as was thought necessary for it in the early days of its introduction. The plants at Kew are now superb, bearing numbers of rich violet-purple flowers, which individually must be quite 4 inches across, and they come in succession for some time. The plant is seen to better advantage when planted out and trained to the roof as at Kew, and the flowers are finer than those of pot-grown plants. In growth, too, the plant is handsome with its broad green, prominently veined, hairy leaves and woolly shoots. There is quite a host of fine flowering plants to train to our greenhouse roofs and pillars for flowering in spring, summer, and early autumn, but when all these have had their day this Pleroma bursts forth in a richness and profusion of blossom exceedingly welcome during the dullest days of the year.

The scarlet Oak (Quercus americana coccinea splendens).—Among all the bright autumn tints we have seen nothing so brilliant and lasting as are the leaves of this Oak, of which Mr. Anthony Waterer showed a large tree at the Drill Hall on Tuesday. To see it is to desire it, and one wishes that it could be increased as readily as a Willow. Every leaf of the plant shown was perfectly coloured, and although the plant was seen to disadvantage in the dull light of the Drill Hall, its effect in sunlight in the open air must be as vivid as that of the scarlet Dogwood or the Cardinal Willow when their bark is at its brightest. Most of these gay pictures of autumn-tinted leaves are of very short duration, but Mr. Waterer says that this Oak will retain its brilliant leaves till about Christmas.

HORTICULTURAL EXHIBITIONS.

How frequently complaints are made as to the judging at some of our horticultural shows by disappointed exhibitors is well known to most gardeners, and the statement is occasionally made that the judges looked at the cards before making their awards, or other charges are brought against them. Such statements are rarely, if ever, correct, and reflect little credit on the person bringing such a discreditable reflection on the judges. At the same time, I think it would be decidedly advantageous to remove any opportunities of having the slightest suspicion on the integrity of the judges. A great deal towards this object may be done by providing all exhibitors with their cards sealed in separate envelopes, with a number attached or written on the outside corresponding with a like number in the secretary's book. When the award is made the envelope is then opened, and the first, second, or third prize ticket affixed, as the case may be, to the exhibitor's card, and the envelope taken away at once by a member of the committee who follows the judges round, the other envelopes, where no prizes have been awarded, not being opened for the exposure of the cards until some time after the public have been admitted to the show, thus proving that no card examining has been done. By this mode it is palpable that no favouritism can be shown to any exhibitor, and a cause of complaint is removed from those who are bad losers. Very little extra expense is incurred in purchasing the envelopes for the cards and much annoyance is avoided. One thing should be strictly enforced, *i. e.*, to exclude the judges from the show until called upon to commence their duties. This is not always done, and it is certain to cause some unpleasantness if they mingle with the exhibitors prior to the awards being made. I have seen judges at a show that I formerly attended assisting their friends to stage, and also making suggestions how to improve the appearance of their exhibit. Now if the competition was very close, the same judges would, without a thought of any wrong, naturally lean towards or favour their friend's exhibit. No doubt mistakes are often made by judges, but it is not always their fault, but that of the exhibitors, who will not finish staging by the stipulated time. It stands to reason that when the judges cannot commence to act until an hour later than they should have started, they must hurry over their work to finish by the time the public are admitted; even then it is not always possible to complete the awards before opening time. Every judge who has had to go on with his duties with the public swarming around him and his colleagues is well aware how difficult it is to arrive at a just decision, as it is impossible to examine the exhibits as carefully as if free from a lot of people jostling against you. I think I have stated sufficient reasons to show that it is to the interest of exhibitors and committees that every effort should be made to finish staging at the time named on the schedule; that it can be done is proved every year at the biggest horticultural exhibition in the provinces, viz., Shrewsbury. There the tents are cleared at the appointed hour, the judges walk in at once, and the public are admitted exactly at the time advertised for the show to be open. Another matter that possibly concerns committees more than exhibitors is how to avoid having unsightly blank tables—through exhibitors not staging according to their entries, thereby spoiling the general appearance and effect. This defect is not discovered until almost the last half hour for staging, and the committee are frequently bothered to know how to fill the space allotted to disappointing exhibitors. To check this difficulty, a society (of which I am a member) inserts a clause in their schedule, that "for every entry not staged a fine of 2*s.* 6*d.* is charged," so that if a person made forty entries and only staged half that number, he would be fined 50*s.* This provision acts splendidly, as the committee know exactly how to arrange for the exhibits (as all the entries are usually staged); if not, the fine has to be paid, and goes towards the funds of the society. Hundreds of exhibitions will be held within the next few weeks, and I hope the above remarks may prove serviceable by preventing friction, and also giving hints to newly-formed societies. R. H.

The weather in West Herts.—A very cold week for October, the mean temperature being about 12° below the average for the time of year. On no night did the exposed thermometer register less than 9° of frost, and on the night preceding the 28th 13½° of frost were indicated by it. It is now five years since such low temperatures as those recently recorded have been experienced in the month of October. There occurred a little rain and sleet on the 26th, otherwise this was a dry week. All my Dahlias were killed by 13° of frost on the night on the 23rd, or nine days in advance of the average date of their destruction in the previous ten years, and earlier than in any year since 1888. During October there were only four days which could be regarded as unseasonably warm, while seven were of about average temperature, and the remaining twenty days more or less unseasonably cold. The check to its growth that vegetation received towards the end of October will perhaps be best shown if we take the temperature of the ground at 1 foot deep at the beginning and end of the month. On the 1st the highest reading at this depth was 62°, and the lowest 40° on the 30th, showing an extreme range of 22°. In none of the previous ten Octobers has the range in temperature at the same depth exceeded 15°. Rain fell on fifteen days, and to the total depth of 2¾ inches, which is about half an inch below the October mean for the previous thirty-nine years. At the commencement of the month the soil was unusually dry for the time of year, and is now gradually becoming dry again owing to the very slight rainfall of last week. During the past ten years there have been only two Octobers with such a deficient record of sunshine; the total amount recorded, however, exceeded that of the previous October by about twenty hours. The winds were mostly light for the season; indeed, on no fewer than thirteen days the average rate of movement of the air at 30 feet above the ground fell short of four miles an hour.—E. M., *Berkhamsted.*

Names of fruit.—*C. Edwards.*—1, Fondante d'Automne; 2, Hacon's Incomparable; 3, Van Mons Leon Leclerc; 4, Uvedale's probably; 5, Apple, Yorkshire Beauty.——*E. Hart.*—Pear Van Mons Leon Leclerc. Apple not recognised.——*J. O. M.*—1, Louise Bonne of Jersey; 2, Olivier des Serres; others next week.— *J. H.*—1, Gravenstein; 2, Roundway Magnum Bonum; 3, Kerry Pippin; 4, King of the Pippins; 5, Allen's Everlasting; 6, Royal Russet.

Names of plants.—*W. E. G.*—Cotoneaster affinis. Wild birds eat the berries and do not die, so this can hardly have caused the death of the poultry. ——*H. P. Powell.* The Hornbeam (Carpinus Betulus). ——*E. A. L.* Oreodaphne californica.

No. 125'. SATURDAY, November 9, 1895. Vol. XLVIII.

"This is an Art
Which does mend Nature: change it rather; but
THE ART ITSELF IS NATURE."—*Shakespeare.*

CHRYSANTHEMUMS.

NOTES FROM RUSSIA.

DAILY I ask myself, what can I do to prevent the Chrysanthemum flowers damping? It is sad to see these beautiful flowers fading away, even before they are fully open. My Chrysanthemums are in the same house in which they have been grown for the last two seasons, and damping has never been so bad as this year. I not only find that the petals are damping on the top, but the whole interior of the calyx is rotten. I am very much disappointed. One has much trouble to get good flowers, and now, when the time comes to be compensated for the work done, there is only failure. It is of the big blooms only I am speaking; all the other varieties are perfect and not a flower has suffered from this disease. All are in the same house, and have had the same quantity and the same quality of manure. As regards the weather, we have had an unusually fine autumn. Some varieties suffer much more than others; for instance, G. W. Childs and W. Seward are damping off wholesale, or nearly so; next follow Viviand Morel, Ch. Davis and Puritan. Bouquet des Dames and Avalanche do not suffer nearly so much as the kinds mentioned.

I have observed a rather peculiar characteristic with Viviand Morel and Ch. Davis. As you know, these two varieties vary very much in the tint of colour; the former produces flowers almost snow-white and others lilac-mauve, the second clear yellow and bronzy-buff ones. The white and the yellow blooms suffer much more than the others. What is the reason? The plants with large blooms (especially those with dark flowers) have been shaded in the sunniest part of the day.

I am obliged to Mr. Shoesmith for his kind and detailed answer on p. 195, and no doubt shall greatly profit by it. Most of the kinds named by Mr. Shoesmith are in my possession, and the few I lack I shall add to my collection next spring.

Mr. Shoesmith will excuse me for saying that I do not agree with him concerning Lady Fitzwygram. I have grown this kind for two seasons, but I have now discarded it. Of course it is a most profuse bloomer, the individual flower is good, height of plant all that can be desired, but the stalks are too weak, and all the flowers droop in the most undesirable way, as well on disbudded plants as upon those not disbudded. Many new varieties are showing this fault, and I think it most desirable to direct the attention of raisers of new Chrysanthemums to it. The growth improves, the plants get dwarfer, but the drooping habit of the flowers is on the increase, and that, I think, is a great fault. I do not doubt that Lady Fitzwygram is, nevertheless, a very valuable kind for florists, who want a lot of white blooms upon short stalks—for wreaths, for instance, where each flower is wired—but for arranging in vases where long stalks are requisite it is worthless. I have replaced Lady Fitzwygram with Mme. Gastellier. The habit of growth and abundance of flowers are as in the former; colour creamy white; the centre of the flowers built up higher than in Lady Fitzwygram, more like that of M. G. Grunerwald. But what chiefly tells in its favour is that the flowers are borne erect, much better than in Lady Fitzwygram.

Allow me to once more call the attention of your readers to the truly charming kind, Norbet Puvrez. Though it began flowering at the end of September, I have at the present date (October 29) some magnificent specimens, grown as half, or, better still, as quarter standards. The stems measure from 12 inches to 15 inches in height, and the head from 20 inches to 24 inches in diameter, quite covered with blooms of its peculiar terra-cotta shade. A very fine September-flowering, orange-coloured, dwarf pompon is Mme. Edouard Lefort. Mme. Eulalie Morel is good, thanks to its dwarfness and colour, but, as in Mme. Gastellier, the flowers droop. General Hawkes I consider the best kind of its colour, would be better if dwarfer. What do you think of Fleur Parfait? Much has been written about Mme. Lacroix. I can do without it. Disbudded it reminds me somewhat of a small, bad Avalanche; not disbudded, it looks very poor. Ryecroft Glory is just opening for the first time with me, and I am watching the progress of this much-praised kind. The large flowering pompon Mme. Gabus I consider not worth growing; it looks very similar to my old Martinmas, but the latter is in every respect better. Mme. Gabus shows a lot of flower-buds, but only some of them open, the remaining ones being blind.

Of the pompon class, I like best the old Mlle. Elise Dordan. Snowdrop and Purity I cannot get to flower, and shall be obliged to discard them. Do you know the golden orange-coloured pompon Veuve Clicquot? Last year I was about to discard it, but then I made up my mind to give it a trial as a standard, and now this standard is simply grand. Grown in bush form, it is not worth anything, owing to its tall, straggling habit of growth, but as a standard it is first-rate, the flowers of a fine lively colour. I have now good standards in flower of Roi des Précoces, W. Holmes, and Martinmas (a little too stiff for standard work). The stems of these standards are from 30 inches to 35 inches high.

What is your opinion about the Queen of England, Empress of India, and Golden Empress of India? Do you think them really worth growing if not intended for exhibition? I get one good flower and five, or even more, bad ones. I fancy I never read in THE GARDEN about the yellow sport of Bouquet des Dames, sent out from Germany under the name Germania. It has just opened, and I consider it the best yellow Chrysanthemum of the large flowering section I have got. The growth and the form of the flower prove that it is indeed a sport from the old Bouquet des Dames, and a good one. The colour is extremely pleasing—a clear yellow hue. The other kind sent out from Germany under the name Frau Commerzienrath Gruson is a sport from the well-known La Triomphante. The colour is bronzy buff; growth, &c., like the parent.

R. KATZER.

Pawlowsk, near St. Petersburg.

Chrysanthemum Ryecroft Glory.—It would be difficult to find a more useful, showy or desirable Chrysanthemum for out of doors than the above. I have at the present time (October 18) several plants growing on a west border. They are from 4 feet to 5 feet high, nearly a yard across, and one mass of rich orange-yellow blossoms. For cutting, this Chrysanthemum is most valuable, the long stout shoots being thickly covered with blossoms.—E. M.

Chrysanthemum names.—Each recurring season various protests are to be found in the different horticultural papers against the practice of giving to new Chrysanthemums the names borne by old and well-known varieties, but these protests seem to be useless, for young as the season yet is two glaring instances have already put in an appearance among the varieties that received first-class certificates at the meeting of the National Chrysanthemum Society, held at the Aquarium on October 8 and following days. The two varieties in question are Boule d'Or and Phœbus, and of these Boule d'Or was, according to the catalogue of the National Chrysanthemum Society, raised by Bernard, and sent out in 1882, while among the newer varieties enumerated in the supplement issued in 1894 a second Boule d'Or appears, so that the present one described as new must be the third. In the case of Phœbus the original variety (Japanese reflexed) was raised by Salter, and sent out by Messrs. Veitch in 1886, and now the second one puts in an appearance. This system, or rather want of a system, in naming Chrysanthemums leads to no end of confusion; in fact the nomenclature is in such a muddle, that to keep even fairly conversant with the different varieties entails more time than anyone except a specialist can spare for one class of plants. The aggravating part of the matter is that there is not an atom of excuse for such proceedings, as lists and catalogues are continually being issued in which it is easy to ascertain if the name has been in general use before.—T.

CHRYSANTHEMUMS AT CHELSEA.

THE display of Chrysanthemums in the nursery of Messrs. J. Veitch and Sons is a large one, and the collection comprises a very complete set of this season's novelties, whilst the newer kinds of the last few years are also well represented. It is gratifying to note that, besides the acquisition of new varieties in other shades of colour, there has been a manifest reduction in the stature of the plants, and, taking them collectively, there is now a goodly number that, even when grown for large show blooms, bear their flowers at a height well within, or beneath, the line of vision. Most of the plants in the Chelsea collection carry from three to five flowers, and they are altogether an admirable lot. They not only fill the large span-roofed house usually devoted to them at this season, but so great is the number of varieties that must be grown, and of novelties to be tried by those who essay to be abreast of the times in regard to this special flower, that they are numerously distributed in other houses also. The predominance of Japanese kinds is another prominent feature of latter-day Chrysanthemum displays, and is quite as marked here as elsewhere, by far the greater number of those we noted belonging to this section. Pallanza is fine, of a rich Sunflower-yellow colour, with long florets that droop at their points, altogether a graceful and distinct bloom. M. Pankoucke is also yellow, but of a little lighter shade than the preceding, with similar long drooping florets, the plant of medium height and robust growth. Miss Louise Black is a magnificent variety, of a deep Buttercup-yellow, and beside it even Sunflower looks pale. The petals are long and quilled, and the flowers full, broad, and graceful. Mons. Ch. Molin, a reflexed Japanese, has a flower of fine depth and breadth of petal, in colour deep amber-yellow, flushed with bronze on the lower half of the petals. M. Gruyer is very fine in the shade of colour that for so long made Mme. Audiguier so indispensable, but without the tall habit of this latter kind. Its rosy flowers are very distinct and the outer florets droop considerably. Mme. Carnot appears to be a worthy addition to those having white flowers, judging from its fine character here. It has a large, full flower, the florets being long, narrow, intermingled and drooping

at their tips. Warrior (an incurved Japanese) has a good bloom, the inside of the petals chestnut-red, the reverse buff. Queen of Buffs is a pretty shade of buff flushed with bronze, and touched with a brighter shade at the base of the petals, which incurve in the centre, making a fine full flower. Mutual Friend, white, with long quilled petals, looks promising; and Graphic, also white, has a full solid, but graceful flower. Mme. Calvat has a very large bloom, pure white in colour, with broad petals distinctly reflexed. Vice-President Calvat was noted in good form and colour, rich crimson, with golden reverse. M. Georges Biron is a worthy addition to this class, being dwarf and free in growth, and very showy, of a bright chestnut-red, with buff-yellow reverse, the florets long and somewhat drooping. E. Molyneux when first sent out was a great gain in point of colour, and doubtless is the parent of the fine series that partakes of the same character, with even greater brilliancy of colour. John Shrimpton, William Seward and G. W. Childs are quite an indispensable trio. Duchess of Wellington is another superb yellow with a large bold flower, the outer petals extra long and drooping, and Princess May, now well known, was in good form. Nyanza has a fine flower of great substance, bright red inside with a reddish brown reverse, really a bold handsome kind, and Primrose League was noted, one plant having three grand flowers of a delicate cream-white colour and light graceful form. Hairy Wonder is all that the name suggests, and would appear a good grower judging from the robust plant, with several bronzy buff flowers excessively hairy. Louis Boehmer of this class was also well grown and finely flowered. Eva Knowles is distinct, the flower of tasselled lightness and rich apricot colour, with straw-yellow reverse. Colonel Bourne is another sterling acquisition in reds, dwarf and free, with a full, high, broad-petalled flower of a distinct light crimson, very rich and bright. William Tunnington, a new incurved variety, was finely represented. Its petals are broad, bluntly pointed, of a deep chestnut-red, tipped with bronze, the reverse buff. C. H. Curtis, which does not appear to have been generally satisfactory, was also well flowered, the blooms being large, made up of an enormous number of narrow petals, which are of a deep rich colour, but it appears to lack that perfect finish towards the centre which makes up the standard of incurved perfection. Others that we noted in fine form were Louise, C. E. Shea, Mr. W. Dreer, Mrs. R. C. Kingston, W. H. Fowler, and Col. W. B. Smith.

It might appear as though the town Chrysanthemum grower had no drawbacks, since it is possible to bring the flowers to perfection even in an environment of smoke, but the blooms when expanded do not last so long fresh as in the purer country air.

SHORT NOTES.—CHRYSANTHEMUMS.

Chrysanthemum Clara Jeal.—This is a notable addition to the reflexed section. It is no erect or stiff-petalled flower called reflexed by courtesy, but a handsomely formed one, colour golden buff.

Chrysanthemum Thomas Wilkins gave promise last season of being a deserving variety, belonging to the narrow petalled section. The blooms are well built, solid and of pleasing shape, the florets drooping gracefully at the point. The colour, a deep chrome-yellow, is pleasing.

Chrysanthemum La Moucherette is one of Calvat's fine seedlings, and bids fair to excel that favourite Col. C. B. Smith, for it shows not only similar form, but richer colouring. Whether it is likely to prove so good a doer as Col. C. B. Smith remains to be seen, as the latter has become a prominent variety in all collections. This season it has been found in good form almost everywhere.—D.

Chrysanthemum Virgin Queen.—This is one of the most pleasing of the single section. The petals are long and loose, the eye golden and not large. The plants bloom at a moderate height and profusely. A little disbudding improves the flowers appreciably. For the decoration of vases, &c., it is a most beautiful variety.

Chrysanthemum Philadelphia.—I have seen this American novelty in several collections, but in each case of a creamy hue, the petals showing a tendency to reflex rather than to incurve. Perhaps our climate does not suit it yet, and it may show that fine incurved form seen on imported flowers last year after it has been grown another season.—D.

Chrysanthemum Mrs. C. E. Shea was sent out in the spring of this year at the price of one guinea each plant. At that time persons were dubious about purchasing this novelty, but I fancy those who did not will regret it. The colour is a soft creamy white, with just a tinge of green in the centre, while the florets are unfolding. They are long, and entwine amongst each other irregularly. The blooms have a massive appearance without any signs of coarseness.—S.

Chrysanthemum Phœbus.—This must not be confounded with the variety sent out by Mr. A. Salter in 1886 under this name. It is of Continental origin. I have this season seen it growing under various conditions, and in all cases it was promising. It grows 6 feet high when treated in a natural manner. The blooms of the reflexed Japanese type are well formed, the florets, flat, drooping slightly at the tip, are fairly broad and evenly disposed, the colour a clear golden yellow.—P.

Chrysanthemum Vignolo.—This is a new and lovely single-flowered variety raised by Mr. H. Briscoe-Ironside, and shown by him at the Crystal Palace, where it attracted much notice besides being certificated. The flowers have long narrow petals, which taper to a fine point. They are of a distinct shade of rosy buff, changing at the base to a clear deep yellow, which forms a well-defined, but irregular zone around the yellow disc. It is a decided acquisition to a class that yearly grows in numbers and popularity.

ROSE GARDEN.

ROBUST *VERSUS* COMPACT-GROWING ROSES.

Every year it appears more manifest to me that some sort of classification is necessary amongst the Hybrid Perpetual Roses. The weak growers require to be separated from those of a vigorous habit, and I think that nurserymen's catalogues should furnish this information in a more direct manner than they do at present. Why cannot such varieties as Merveille de Lyon and others of the same habit of growth be classed by themselves, so that the public can tell at a glance the kind of Roses they are selecting? There should be no difficulty in separating such sorts as Margaret Dickson and many others, which frequently make shoots from 6 feet to 8 feet long the second year after planting. If this was done there would be no excuse for the inequality that many Rose beds and borders now present, with many of the dwarf growers in the middle or at the back, the robust growers being near the outside and overtopping those at the back.

There is a great waste of force in the plants when we have to reduce these 8 feet long shoots. To obtain the full benefit from the robust growers they want pruning on quite different lines from the others, and therefore should be planted by themselves or in the inside row. I think we are altogether wrong in planting in the indiscriminate way we now do, and as the nurserymen do not plant in that way for their own convenience, I cannot see that it would be any hardship for them to point out to their customers which are the low growers and which are the robust ones in separate lists. We prune the strong-growing Roses too much. The long, thick shoots which they annually send up from the base Nature never intended to be slaughtered in the way they are. To prove this, we have only to peg one of them down on the ground and it will flower nearly at every joint along its whole length. I am aware it is not always convenient or desirable to have pegged-down Roses, nor am I advocating that plan. Instead of cutting the long growths down to within 1 foot or 18 inches of the ground, we should have them 4 feet long and furnish a stake for each, so as to support subsequent growth and draw it away from the middle, eventually converting the plant into a large bush. Every year one or more strong growths will rise from the bottom, while the same number of old ones may be cut away to make room for them. Only those who have seen Roses grown in this way can realise the number of flowers that a single plant will produce in one season. J. C. Clarke.

The Macartney Rose.—The single white form of this Rose is worthy of a place in all gardens. I first saw it at Funchal, in the island of Madeira, in 1888, where it was climbing over a tree about 30 feet in height. The stems were as thick as a man's arm, and long flowering sprays hung downwards from the boughs in graceful festoons. Though doubtful of its hardiness, I procured a plant in 1893 and planted it against one of the Larch supports of a pergola. That winter, on one night, the thermometer on the Grass registered 21° of frost, and I gave the Rose up for lost, but it survived, and during the summer made a shoot about 5 feet in length, a few flowers, which did not open well, appearing in October. Last winter it was unprotected, and after the long frost looked absolutely dead. However, with the return of spring it burst into growth and threw out a number of short side shoots, each of which terminated in one or more buds. The flowers, some of which are 4 inches across and scented with a delicate ripe-Pear-like fragrance, are very beautiful, and have opened, not simultaneously, but in parties of from two to five a day, remaining in beauty for about two days and closing every evening. There has been no day since the commencement of its blooming on which two or more blossoms have not been open, and it gives promise of continuing to flower until the end of the month. The foliage, dark and exceedingly glossy, is very lovely, and sets off the white petals to perfection. The Rose is evidently quite hardy in the south-west, and should be more extensively grown.—S. W. F., *Torquay, October* 20.

Rose Niphetos.—As a standard this Rose is much hardier than is commonly supposed. I expect few cultivators outside the western counties would think of growing it as a standard in the open air, but I can assure them that in the few instances in which it can be seen growing it is as vigorous and flowers as freely as the majority of the Hybrid Perpetuals, and when it comes to be better known that it does well as a standard in the open it will be more generally grown. I think that last winter quite settled the question of its hardiness, as I have some standards that lived through it with the buds in a dormant state. The plants have not only grown well, but they have flowered freely and been as free from mildew as any other variety. They have in fact made fine heads, and in every other respect leave nothing to be desired. It is unfortunate that this Rose should be regarded as more tender than many others of the same class, but it is so regarded by many cultivators even in the west of England. There is certainly no reason for this in the case of cultivators who reside in the western counties, and I am not sure it would not thrive in the midlands. If there are any that do not care to venture it as a standard, they may safely use it as a climber against a south wall. When so treated in Somerset it is very satisfactory.

There is a very healthy plant growing against the south front of Col. Serle's house at Fitzroy, near Taunton, and the only fault that gentleman finds with it is that the flowers are too large. I do not think we want any better evidence of its value as a climber.—J. C. Clarke.

VERSES IN RETURN FOR A BOUQUET OF TEA ROSES.

J'ai, sur toute fleur déclose,
A chanter l'honneur de la Rose.
Jean de la Taille.

Why should the fairest soonest fade?
Dear Roses, in a golden glass,
So frail and delicately made,
I fear to touch you as I pass.

Here "Dr. Grill," of tender tone,
Betwixt an apricot and peach,
Behind a shell-like "Lambard" lies,
A mystic sunbeam gilding each.

This "Rêve d'Or" should stand alone,
Round, filmy-white, with pink inside,
Making creamy harmonies
With wan "Safrano" spreading wide.

And radiant in this sunset gold,
"Madame Berard," with stalwart stem,
Expands her massive foliage bold,
And half conceals a ruby gem.

But as I kiss the fairest flower,
With petals pink as babies' feet,
There falls a noiseless, scented shower—
It's "Souvenir d'un Ami"—sweet!

M. C. D.

Flower Garden.

MICHAELMAS DAISIES.

The observations concerning the above useful group of perennials by the Rev. C. Wolley-Dod (p. 293) are both seasonable and highly interesting; indeed, they are valuable to all interested in these flowers, coming as they do from so close an observer. Mr. Wolley-Dod concludes his remarks with the observation that "much more might be said about the whole class and its treatment," and in this I fully agree. It is interesting also to learn that, seeing the short lapse of time since the conference, Mr. Wolley-Dod has been so successful in the raising of improvements in these flowers. It is quite true, however, that there were many good things present at the conference, and, given a selection of the best and most distinct, it would be an easy matter to raise any number of seedlings. Not altogether a haphazard gathering of all the seed heads available should be made, as this would in some degree be to little or no purpose; but with a fixed motive in view, endeavour, by careful hybridisation and selection after, to attain the desired end. For instance, suppose a desire existed for the rosy purple shades of Novæ-Angliæ ruber, which are considered by Mr. Wolley-Dod to be too tall; in such a case why not take Novi-Belgii Pleiad, a dwarf variety with bright rose flowers, and fertilise with pollen from the brightest of the Novæ-Angliæ ruber section. By making the former the seed parent it may be possible to get a plant of more medium height than we have in the Novæ-Angliæ group, and with possibly brighter flowers. The blooms so fertilised would, of course, need protecting. There are many others that may be operated upon, and by these means these beautiful plants may quickly become more beautiful. A very charming kind for beds is Novi-Belgii lævigatus, which in the hands of the hybridist may be worth a good deal. Where a dwarf, free-flowering and compact bush is required, this is excellent in every way, while its pretty masses of rose-pink blossoms are most effective. What appear to be most in demand are the warmer shades of rose and red, bright decisive colours that are effective at a distance. Of lavender, mauve and lilac-blue shades there are already more than enough. This is why I recommend raising seedlings more on fixed lines, otherwise, with the present preponderance of the above-named shades of colour and the unsolicited assistance of the ever busy bee, progress would be slow. Of course there are good things the result of haphazard crosses, though I have never had much success myself from numbers of seedlings transplanted.

I notice that the varieties of Novæ-Angliæ are too tall for Mr. Wolley-Dod, but the height of these or any other tall kinds may be in a great measure reduced if it is so desired. Many of the most beautiful kinds are too tall certainly for beds, but if any such are cut down to within 6 inches or 9 inches of the soil in the first week in June each year, all such as the Novæ-Angliæ kinds would flower at about 3 feet high, rather under in fact. This cutting down does not in any way mar the general flowering, and those plants so pruned bloom just as freely and less than a week later than they would had they not been interfered with. The pruning is not recommended so much for freshly planted subjects as for the more established plants. Of course there are places and positions in many gardens where tall plants are especially needed, and there are many others where dwarf kinds of these Asters, and especially late-flowering kinds, are much wanted. Many amateurs with limited space at disposal object to tall flowering plants, but by adopting the cutting-down process many of these autumn flowers should find a home in most gardens. By dwarfing, these plants are adapted to a greater variety of purpose, which should be of advantage in large gardens where spacious beds have to be filled for certain seasons. For several years in succession prior to the conference I experimented with these Asters, and found that the height was reduced about one half.

Another plant treated in the same way makes a splendid bed at about 3 feet high. I refer to Pyrethrum uliginosum; indeed, it flowers more freely when pruned. One year I had a bed some 40 feet long of this, and in June I cut the one half down as above suggested, leaving the other portion to attain its natural height. The latter at flowering time was fully 6 feet high and about four days earlier in its flowering, while the pruned portion was just half its usual height. The latter made a really splendid show, effective at 100 yards away, and by its dwarfness visitors could see the effect. There is good room for such plants in many gardens where only a mass of greenery exists. For instance, imagine a sloping shrubbery bank at some distance from the dwelling, and what plant have we better suited for displaying itself to advantage in such a position? It may even be formed into a floral bank by itself by pruning the plants in this way in June, and with the shrubs as a background would produce capital results.

But to return to the Asters. I note Mr. Wolley-Dod very prudently refers to selecting kinds "suited to the climate in which we live." Here in the south the whole family, with the exception of grandiflorus, flower well year by year. At the same time, it would be useless to recommend all the kinds for northern districts and Scotland. For the latter the Amellus section would prove admirable, and where strong-established plants exist, a really fine display may be relied upon as a certainty. Though even with these, where planting is being done, I would advise early autumn rather than spring, because spring planting must produce a check which may be welcome in the south to make later bloom. Another beautiful dwarf kind and early is acris, with its remarkable masses of flowers, and close by in the flowering is the very charming ericoides which must have space to display its beautiful and graceful spray-like branches of bloom. A. ericoides, by reason of its gracefully arching stems, may be well suited for the rockery also. In short, it is such as this and the beautiful Diana mentioned by Mr. Wolley-Dod that must be seen in groups by themselves if we are to see their beauty and worth. Many of the kinds are worth good culture, and, given a fair depth of soil and room for development, will show themselves worthy of it. It is little good huddling these beautiful sorts into the shrubbery, to be forgotten and uncared for, when the flower borders are nearly devoid of blossom. Very pleasing, too, are many kinds for vase decoration, and in sheltered gardens and positions where they can receive protection from early frost, many a welcome gathering of flowers may be made till quite late in the year. Anyone with only a slight knowledge of these plants may, by studying the various aspects of the different sections, speedily turn them to good account either for the shrubbery, the border, or on the lawn in open beds, and for cutting.—E. J.

—— For the last few years I have taken a great interest in named varieties of Michaelmas Daisies, procuring them from many sources until I have now over eighty distinct kinds. To some the difference may at a glance be almost imperceptible, but upon a closer inspection a distinction is apparent. It is not only as garden flowers in the autumn that Michaelmas Daisies are so pleasing, but in a cut state they are also useful and much appreciated. No hardy flower that I know lasts longer in water than some of the Asters. To obtain a pleasing effect and to enjoy their beauty in the garden they should be grown by themselves, or at least they should have few associates in the shape of other flowers. To see them struggling amongst herbaceous plants generally is, I fear, all too common. I grow Asters in a border 5 feet wide backed up by a closely cut Laurel hedge and margined in front by grass. The only plants that are associated with the Asters are Pyrethrum uliginosum, Rudbeckia speciosa, Chrysanthemum maximum and Anemone japonica alba. From the middle of August until the end of October there is a charming display of flowers. Along the front of the border there are clumps of A. Amellus bessarabicus a yard through, alternated with a similarly sized clump of Rudbeckia speciosa. The rich orange of the latter contrasts superbly with the deep violet of the Aster. I have at least fifty clumps each of the two plants in combination. Those persons who have not tried the two together should lose no time in adopting the suggestion.

A few lines on those Asters that I found synonymous may be instructive to those who contemplate planting this autumn. A. dumosus and A. fragilis carneus were sent to me as distinct, but the former, no doubt, is the correct name. Undoubtedly this is one of the best of dwarf growing sorts. Mme. Soymuir I received as being something quite new, but I find it exactly the same as longifolius formosus. Circe is identical with lævis Calliope, a free-flowering, fairly tall-growing variety. Amethystinus and oblongifolius are when fully expanded closely allied; the former when in the bud state is distinct by reason of the buds having a pink tinge of colour about them. Both in full flower at the present time are decidedly showy and free-flowering.

As to which are the best varieties of Asters is purely a question of taste, but no doubt the

small-flowered kinds, such as cordifolius elegans and c. e. Diana, are the best. The ericoides type, too, finds many admirers. In spite of the freedom of flowering of A. ericoides elegans, I think the type is more handsome. The branchlets are horizontally inclined, giving more grace to the plant than the more erect form of e. elegans. E. Clio is a dwarf-growing, much appreciated variety. With me the buds of A. trinervis have not yet begun to unfold their calyx. The pure white blossoms of A. Tradescanti are only just opening here and this is regarded as being an early season. This grows 5 feet high.

Vimineus is hard to beat where a graceful character and free-flowering habit are appreciated. Chapmani with its horizontally formed side shoots is less compact than some, but it finds admirers. I never saw such a profusion of blossom upon plants of Novæ-Angliæ ruber as this year. This is without doubt one of the showiest varieties we have. Amongst white-flowering kinds none is so good in my opinion as Novi-Belgii Harpur-Crewe. A. N.-B. polyphyllus is free-flowering and pure white, while N.-B. Snowflake and Lady Trevelyan are worthy of a place. The early flowering dwarf-growing ptarmicoides finds many admirers. A. diffusus, A. d. pendulus, and A. d. horizontalis are all worthy of attention. The two former are late-flowering, therefore valuable. One of the finest of dwarf-growing sorts is Pleiad. It grows freely, yet not higher than 9 inches, and flowers profusely. Some of the catalogues describe it as bright rose, but I find much blue in it. A. versicolor and A. v. Themis, the former tall and early, the latter dwarf and late, are remarkable for the changing colours of their flowers. A. acris is too well known to require more than a passing note; no garden could possibly be deemed complete without several clumps of it. — E. MOLYNEUX, *Swanmore Park, Hants.*

WATER LILIES AND NELUMBIUMS IN NORTH AMERICA.

MR. J. N. GERARD, writing to us from New Jersey under date October 10, says :—

Nymphæa tuberosa does not grow so far north as N. odorata. "It is, in Canada, generally quite close to the St. Lawrence, Lakes Ontario and Erie." This on the authority of Professor Macoun, of the Canadian Survey. Nelumbium speciosum is naturalised here in the fullest sense of the term. It lives and thrives in ponds in this section with no protection; its tubers are not tender, as are those of tropical Nymphæas, for they winter out in water at a low temperature, often covered with ice, and this will ruin the tubers of any tropical Nymphæas—as far as we know at present. I do not know how far north it is reliably stable. I think I told you that there are large plantations in Central Park, and the growth there is as luxuriant as one could wish. Where they grow Nelumbiums in city basins in the different parks they plant the rhizomes in large flat boxes as they do all Nymphæas, and transfer them from the nursery when the weather is suitable. At this season the boxes are lifted and stored for the winter. Some of our park tanks are very beautiful in the season, and would be perfect if they were not edged with a lot of ugly colour. The N. speciosum grown here probably all came from Kew stock. I know very little about your little isle, but it seems to me you might manage enough warmth to move the Lotus, and if it once got to running it might stay with you, for it is not necessary that tubers be formed at every break. If you can start a strong tuber (9 inches to 12 inches long) with a good lead, you might plant in good soil in a box and sink it in shallow water in a quiet nook where the sun would look at it at all times.

It always pains me to read one of those notes in THE GARDEN from those who are trying to grow Nymphæas in spring water. Marliac's large Nymphæas are unsurpassed; albida, Chromatella, carnea, rosea and sulphurea are all perfect; still, if I grew but one white, it should be N. a. candidissima, as it will give many more flowers than N. albida. I do not care much for Marliac's small ones beyond N. Laydekeri, as to whose parentage I cannot but think Marliac is mistaken. If it is not from N. sphærocarpa, it is a strange evolution.

The garden is dust-dry and not very inviting at present. Our first hard frost is about due, after which we shall have charming weather and the glories of changing leaves.

AUTUMN FLOWERS IN YORKSHIRE.

THE following plants were in flower in the rock garden and open border at Holden Clough on October 16, 1895 :—

Achillea argentea
Acæna Novæ-Zelandiæ
Anemone japonica
  vernalis
Antirrhinum glutinosum
Arnebia echioides
Asters, various
Aubrietia purpurea
Calamintha grandidora
Cerastium Biebersteinii
Campanula hirsuta
  mollis
  muralis
  pusilla
  sibirica
Centaurea montana
Chelone barbata
  Lyoni
Chrysanthemum atratum
Clematis erecta
  coccinea
  crispa
  Jackmanni
Convolvulus mauritanicus
Coreopsis lanceolata
Corsican Daisy
Coronilla iberica
Corydalis lutea
  ochroleuca
Crocosmia aurea imperialis
Crocus
Colchicum autumnale
Dahlias, various
Dianthus frigidus
Digitalis grandiflora
Epilobium alpinum
Erica ciliaris
Erodium Manescavi
Erythræa centaurium
Escallonia microphylla ?
Gentiana asclepiadea
Geranium balkanum
  sanguineum
Geum reptans
Gladiolus, various
Gypsophila repens
Helenium nudiflorum
Helianthemum lunulatum
Helianthus, various
Hippocrepis comosa
Hieracium aurantiacum
Hypericum androsæmum
  prolificum
Iberis gibraltarica
Ionopsidium acaule
Jasminum nudiflorum
Kerria japonica
Lilium auratum
Linaria alpina
  Anticaria
  Cymbalaria maxima
Linum flavum
Lithospermum prostratum
Lobelia cardinalis
  syphilitica
Lonicera sempervirens
Lychnis maritima
  pyrenaica
Malope grandiflora
Malva moschata
Meconopsis cambrica
Menziesia polifolia
Mesembryanthemum
Montbretia crocosmiæflora
Nepeta Mussini
Omphalodes verna
Phlox reptans
  subulata
Physostegia speciosa
Polygonum Brunonis
  vaccinifolium
Primula acaulis
  capitata
Salvia patens
Saxifraga Fortunei
Scabiosa caucasica
Spiræa Bumalda
Symphyandra Hoffmanni
Thymus comosus
Tritoma corallina
  Macowani
  Uvaria
Tropæolum speciosum
Verbascum phœniceum
Veronica prostrata
Viola cornuta
  odorata
Vinca major

R. MILNE-REDHEAD.

Holden-Clough, Clitheroe.

Tritoma Uvaria.—In front of the dwelling-house at Kitnocks, the seat of Mr. E. H. Liddell, I lately saw a remarkably fine plant of this Flame Flower. I counted fifty flower-spikes, many of them 5 feet high. Such a specimen clearly shows the value of a suitable site. The plant in question was about 10 feet from the wall on the south-west side of the house.—E.

German Irises in flower.—We have a great many German Irises flowering at the present time, and very singular it is to see their showy blossoms produced at this season of the year. This freak is doubtless owing to the abnormal weather we experienced towards the end of the summer and early in the autumn, for I never remember them behaving in this way before. The flowering in our case at least is limited to the blue and purple varieties, for none of the yellows or browns have produced an autumnal crop of blossoms. The display of Iris blossoms at this season of the year has usually been limited to Iris stylosa and the earliest flowers of I. alata. It is, however, not at all likely that they will behave in a similar way again. One undoubted merit that may be claimed for the different kinds of Iris, is that they maintain a display of bloom throughout the greater part of the year, for, with those above enumerated now flowering, the autumn is not without their brightly coloured blossoms, and quite early in the spring we have some members of the tuberous-rooted section, such as I. persica, I. reticulata, and its allies.—H. P.

NOTES ON HARDY PLANTS.

Aster Combefishacre.—This is one of the smaller-flowered Michaelmas Daisies, which, notwithstanding the sameness which essentially prevails throughout the Starworts, has a somewhat novel effect when in full bloom. It occurred in the garden at the place after which it is named by the owner, Mr. T. H. Archer-Hind, and belongs to the diffusus group, but has left the typical form further than any that has yet been recognised in cultivation. From the florist's point of view it is simply charming; the flowers are round, full, and profusely borne, and of a shining rose colour. It is perhaps the touch of carmine that imparts the lovely glow to the compact mass of flowers that marks it as a new and desirable variety. Its beauty when at its best was only equalled by its unpromising aspect for a week or more as its heads slowly developed. But it is so with most of these Asters, and the proper way is to wait until the plants are strong and the flowers well out before we condemn them. The stature of my specimen is 3 feet, grown on a sunny bank. I shall certainly include this in my best fifty as known to date.

Ostrowskia magnifica.—In reply to Mr. J. Rankin (p. 292), it is quite normal for this plant to grow quickly and early and then die down. If the roots were not strong enough to flower, as seems to have been the case, the period of greenness would be still shorter. I have had plants quite sere in June. There are many points of interest about the roots of this species both for the botanist and nurseryman. I am glad that Mr. Rankin has proved the roots quite hardy. Flowering plants grow 15 inches to 20 inches high.

Sobolewskya clavata. — Struck with the pleasant refreshing smell of the roots of this crucifer when repotting it, I ventured to taste them, and the flavour was most agreeable, pungent, and inviting one to eat it freely. The roots of this plant are long and of a thickened character much below the crown; they run just under the surface, too, and the thick parts arch upward and become foliated, much in the same way as Œnothera speciosa.

Shortia galacifolia.—I do not think that there are two forms of this to be distinguished by the green foliage and the deep purplish bronzed leaves, and I have had many hundreds of it for some few years. I believe it is entirely a question of exposure or shade. It may be well to note the fact that the mode of culture with shade finds favour with many, because the leaves and flowers may so be got somewhat larger and perhaps faster. Still, you do not get the fine feature of rich bronzy foliage to the same extent as you get with more exposed plants; neither is the shade essential on the score of want of hardiness. The plant is quite hardy, as tested in several positions here last winter. I based my statement that the bronzy leaf colour depends entirely on exposure to light on what occurred here this summer. A two-light frame was full of this plant. All the plants were treated as to soil and everything else just the same, only, to air the frame, one light had been taken entirely off the one half and placed over the other light, so that one half of the plants had two lights over them and the other nothing. The results were that in a very short time the fully-exposed plants rapidly assumed a fine mahogany tint, while the others remained quite green and were taken by experts for Pyrola. Then I took off the lights entirely, and now within a shade the whole batch is alike bronzy. Another lot near a west wall proves the same point. Close under the wall the plants are green, but gradually as they extend from the shadow of the wall they are more bronzed. J. WOOD.

Woodville, Kirkstall.

ASTILBE LEMOINEI.

Under the generic name of Astilbe I shall include quite a group of plants which have a perennial root-stock, herbaceous stems, deeply-cut leaves, and large, branching flower-clusters composed of a multitude of small white or pale pink flowers, which are individually insignificant, but in their massed aggregate remarkably effective. These plants appear to be related to the Spiræas of the Aruncus section, and, accordingly, many of them have been for a long time commonly grown under the name of Spiræas, while botanists have given them the generic name of Hoteia. My opinion is that they should all be legitimately classed under one genus, viz., Astilbe, since most of them have afforded indisputable proof of relationship by the readiness with which they intercross with one another. Moreover, in the first place, the name of Spiræa should be entirely dissociated from these plants. The Spiræas belong to the natural family of the Rosaceæ, and their flowers are characterised by the presence of numerous stamens and a pistil formed of three to five carpels, which are usually free or non-adherent to one another. The Astilbes, on the other hand, belong to the family of the Saxifragaceæ, and their flowers have from five to ten stamens only and two carpels, which are generally adherent to each other, at least at their base.



Astilbe rivularis.

The genus Astilbe was founded on Astilbe rivularis (Hamilt.), a perennial plant, native of Nepaul and the temperate regions of the Himalayas from Cashmere to Bhotan. This species has creeping rhizomes and large radical leaves, which are biternately divided into dentate sections and have the leaf-stalks furnished with numerous tawny hairs. The flowering stems, which attain a height of nearly 5 feet, bear a few alternate leaves and terminate in a large panicled cluster of numerous small flowers. In these flowers the corolla is wanting, and the lobes of the calyx, four or five in number, are of a yellowish-white colour, the eight or ten stamens being pure white. This species enjoys a half-shaded position in cool sandy soil, and may be advantageously planted on water-margins. In frosty weather it should be protected by a mulching of dead leaves or other litter. Under the name of

Astilbe rubra (Hook.) a species was introduced more than forty years ago from the mountains of Khasya, in the north-east of Bengal, where it was discovered by Griffith. It was sent to Kew by Messrs. J. D. Hooker and Thomson, who found it in flower at altitudes of from 5000 feet to 6000 feet. It is distinguished from the preceding species by having five pink petals, forming a star-shaped flower, and by the abundance of stout red hairs which bristle over the stems, the leaves, and the flower-clusters. It is also known by the name of Astilbe rivularis rubra. This species also should be protected from the damaging effects of severe frost.

Astilbe decandra, an American species, was introduced into England in the year 1812. Like the preceding species, it resembles Spiræa Aruncus in habit. Its large biternate leaves have a glaucous tint, and its flowers, which are produced in branching panicles, are white.

Astilbe chinensis (A. odontophylla) was introduced a few years since from China, but does not appear to have in any degree come into general cultivation, as it is not mentioned in any of the horticultural catalogues. This plant seldom exceeds 2 feet in height; its leaves are triternate and its flower-clusters are white with purplish reflections. It may perhaps be a variety of the following species.

Astilbe Thunbergi, Miquel (Hoteia Thunbergi), was introduced from Japan fifteen years since by Messrs. J. Veitch and Sons, of Chelsea. It is a handsome species with very graceful foliage, the long-stalked leaflets of which are oval in form, and covered, as is the entire plant, with small silky hairs. The flower-clusters, composed of white flowers, changing to pale pink, and elegantly disposed at intervals along the flowering branches, are branching and stand quite erect. Everybody is acquainted with

Astilbe japonica (Miquel), more generally known as Hoteia japonica (Morr. and Desne.), and also as Spiræa japonica (Hort.). This species has the lower part of the stems and leaf-stalks covered with long brown hairs; the radical leaves grow in tufts and have trifurcate leaf-stalks and elongated oval leaflets almost coriaceous in texture and of a deep green colour, with a glistening upper surface. The flower panicles are erect and branching, and the bracts, pedicels, calyx, corolla and stamens are all pure white. For forcing this plant is very extensively grown, but it is also an open-air perennial of the first order, and thrives in heath-soil and in cool, moist soils generally, especially when the position is half shaded. The rhizomes are perfectly hardy, but the young shoots are often cut off by spring frosts. Several other varieties of A. japonica are in cultivation. The first, in the order of their raising, is

A. japonica foliis aureo-reticulatis (about the year 1871), the foliage of which is green, variegated with yellow on the veinings of all the leaflets, and the flower-clusters are more tufted and compact than those of the ordinary type. Then there is

A. japonica foliis purpureis, the leaves of which are of a glistening bronze colour (at least in the earlier stage of their growth), which changes to deep green as they become more fully developed. Lastly we have

A. japonica compacta multiflora, a variety which has recently made its appearance in commerce, and which will undoubtedly supersede the ordinary type, for all the uses of which it is better adapted. Its foliage is more compact and abundant, and its flower-clusters are larger and more branching, presenting the appearance of white feathery tufts. This variety seems to have originated in a plant of A. japonica foliis aureo-reticulatis, the foliage of which had reverted to the normal all-green colour, while the panicles of the variety, which are also more compact, would have derived an accession of vigour from the return of the chlorophyll, and thus become increased in size and number.

The year 1879 was marked by the first appearance of a new species to which the most diverse names have been attached. At that date Mr. Wm. Bull, of Chelsea, the introducer of the plant, exhibited it under the name of Spiræa nivosa. In the following year he showed the same plant under the name of Spiræa Aruncus astilboides (a name conferred upon it by the botanists at Kew), or simply Spiræa astilboides, under which latter designation the plant soon became popular. Maximowicz, who discovered this species in Japan, separated it from the Spiræas and named it Aruncus astilboides (Maxim.). But the Aruncuses are also Spiræas, and all the characteristics of the plant in question bring it close to the Astilbes or Hoteias. If we adhere to the specific name, which, perhaps, is now too widely established to be altered, the plant should be named Astilbe astilboides, which after all is not more ridiculous than many existing botanical names, such as Dracæna



Astilbe Lemoinei. Engraved for The Garden *from a photograph sent by Mons. V. Lemoine.*

Draco, Ervum Ervilia, Specularia Speculum, &c. More consistent with the facts of the case and less open to objection would be the name Astilbe aruncoides, and this only wants the sanction of some botanical authority to secure its acceptance.

ASTILBE (SPIRÆA) ASTILBOIDES attains a height of from 20 inches to 2 feet. Its pinnatifid leaves have reddish leaf-stalks and oval, pointed, deeply-toothed leaflets of a brownish-green colour. The branching flowering-stems are covered with small white flowers, which are closely set, and are each formed of a tubular calyx with five white lobes, a corolla of five white petals with ten white stamens and two united carpels. This species, valuable as an open-air perennial, does best in sandy soil and is particularly effective on rock-work, but is chiefly desirable for pot culture and forcing, by means of which very handsome flowering specimens are obtained. The origin of a variety which its raiser, M. Desbois, of Ghent, named Spiræa astilboides floribunda, is recorded in the *Revue de l'Horticulture Belge* of 1881 (p. 145). Mons. F. Wiot, of the firm of Jacob-Makoy and Co., of Liège, one day pointed out to M. Desbois a speedy method of multiplying Astilbe (Spiræa) astilboides, viz., by sowing the seed. Acting upon this information, "I sowed the seed," says M. Desbois, "in the month of March. After the seedlings came up I soon discovered that their foliage was of a deep green colour, somewhat similar to that of Spiræa japonica, instead of exhibiting the metallic brown tint of the type. In the following spring I was struck by the great difference between the characteristics of my seedlings and those of the type, and was still more so when I viewed with admiration the fine thyrsus-like flower-clusters of my seedlings, excelling those of the type in being better furnished and more numerous. I consequently considered myself justified in believing that I had obtained a new variety." M. Desbois was under the impression that his variety corresponded to the specific type of Astilbe (Spiræa) astilboides, and that the plant which was originally introduced under that name was an inferior variety of the same type. I, on the contrary, am of the opinion that his plant was a natural hybrid between A. japonica and A. (Spiræa) astilboides growing, probably, not far from each other in his garden, and so readily capable of being hybridised by the various kinds of insects which are continually frequenting these flowers. I hold this opinion for two reasons: Firstly, because the seedlings of A. (Spiræa) astilboides raised from seed sold by MM. Jacob-Makoy and Co. were exactly similar to the type, and, in the second place, because I have artificially crossed A. japonica with A. (Spiræa) astilboides, and thereby obtained all sorts of intermediate forms, many of which are very fine and superior to both parents. The chance hybridisation which I have just suggested is therefore possible.

As these last-mentioned varieties have not yet been sufficiently studied and are still unnamed, I shall say no more about them at present, and shall conclude my observations with a few words on another hybrid, Astilbe Lemoinei, the raising of which serves to corroborate the proposition advanced above, namely, that Astilbe Thunbergi, Hoteia japonica, and Spiræa astilboides are all only species of the same genus, and should be all classed under the generic name of Astilbe. I have never succeeded in an attempt to fertilise Astilbe (Spiræa) astilboides floribunda with pollen of Spiræa Aruncus—another reason for separating the former plant from the Spiræas and for rejecting the classification of Maximowicz. The following is a description of

ASTILBE LEMOINEI: Foliage very elegant, about 20 inches high; leaf-stalks long, branching; leaflets broadly oval, dentate, crimpled, furnished with hairs, of a very cheerful green colour and satiny appearance. Close to the summit of the foliage are the broad flower panicles with stout stalks, bearing plume-like clusters of flowers and about 20 inches in length. The flowers, which have five white petals, ten pink stamens, and two carpels, are exceedingly numerous, and, viewed in the mass, present the appearance of white plumes slightly suffused with pink. Placed side by side with a plant of A. (Spiræa) astilboides floribunda the new variety is seen to be twice as tall. Its period of flowering is intermediate between those of the two parents, and it commences to bloom in July, a few days before A. Thunbergi, one of the latest-flowering of the genus. Lastly, Astilbe Lemoinei is perfectly hardy, and can be as readily forced as A. japonica, to which it is superior in every other respect.

EMILE LEMOINE.

FLOWER GARDEN NOTES.

THE suggestions made last week as to the first arrangement of herbaceous borders or the replanting of the same—operations that should be put in hand as soon as possible—had reference to the general character of the work, and I should like to supplement this by a list of a few families that will be found acceptable for the purpose. It may be noted in passing that it is on those families that are represented by many varieties that one has to rely to supply a display for large borders, rather than on the more rare species that, as a rule, are often not over-robust, and, as a consequence, do not hold their own well with stronger things. The question of soil must be a primary consideration, and it may be taken for granted that anything that will grow vegetables well will do admirably for the majority of herbaceous plants. Naturally, old borders get exhausted after a few seasons, many herbaceous things being gross feeders, and evidence of deterioration in the plants the preceding summer should be the signal to work in a supply of fairly good manure at the replanting, whilst heaps respectively of heavier and lighter soil may be in readiness to work in for the benefit of those plants that are likely to require them. In the case of new ground the soil should be bastard trenched, and a good coating of manure placed between the two spits.

TUFTED PANSIES.—Free-flowering varieties of good constitution are what one requires when used occasionally on the herbaceous borders, special colours not being so much a consideration as in the formal garden, and bushy compact sorts may be chosen in preference to those of straggling habit. Once planted, they will, if required, stand for several years, but I prefer annual planting. Individual flowers are considerably larger, and, in addition, the young plants not only come more quickly into flower, but stand better given a hot, dry summer.

PINKS.—If cuttings of these were inserted at the right time in suitable soil, they will be grand plants for present lifting. For the purpose under consideration, it is not necessary to grow many sorts—Anne Boleyn, Ernest Ladhams, and Her Majesty are good in their respective colours. The same remarks apply to Carnations, some four or five good sorts that can be guaranteed to stand well and to furnish a mass of flower being decidedly preferable to a number of varieties whose reputation for hardiness and as free bloomers is not of the best. I suggested the other week in connection with the old Crimson Clove that where this variety was liable to be affected by disease Murillo might be substituted, but since writing this I have noticed that Messrs. Laing and Mather, of Kelso, announce that Uriah Pike stood out with them all through last winter, and that, too, with the thermometer several times below zero. No finer crimson variety than this can be found among the hardy border sorts, and the above statement coming from Scotland will doubtless be answerable for the outdoor planting of Uriah Pike in considerable quantities. Other plants that may be used along the front part of the border in connection with those above named are the dwarfer forms of Campanula, Veronica, Iris, and Antirrhinum, all of easy culture and certain to do well and flower freely. In the matter of Campanulas, Mr. Meyer's able and exhaustive article in a recent issue, together with the very interesting illustrations, comes at a very opportune time, enabling one to make accurate selections from this beautiful family for the many different positions they are qualified to fill. It was noted lately in connection with Pyrethrums that the single varieties are most in request for cutting. For a general display, however, on the borders, it is probable that the doubles are best, and some very beautiful things are now available in these plants in seven or eight different shades of colour. The foliage of Pyrethrums is quite an interesting feature on the borders, and may be kept green and fresh throughout the season by a careful removal of anything looking at all brown and the worse for wear, allowing the young growth to quickly develop. If any planting is to be deferred until the spring, arising from the necessity of propagating new varieties that are somewhat scarce, spaces in the border can be reserved for their reception, the ground being prepared at the autumn planting. With few exceptions this spring planting will consist of those subjects that occupy the central portion of the border, and will include the dwarfer section of Phloxes; also Pentstemons, which will go well with Irises, perennial Gaillardias, some of the Lychnis family and the dwarfer Starworts, all of which may be planted at the present time. The number of tall herbaceous plants is great, the only drawback being that with few exceptions they are autumn-flowering; this section should therefore be relieved by Delphiniums, by occasional clumps of Lilium candidum, Anchusa italica, and other earlier-flowering plants.

POTTING UP HARDY PLANTS.—The advisability of growing a goodly collection of hardy plants in pots where glass accommodation is somewhat limited has been before advocated, and the exceptional merit of such things for such work is undoubted. They may be potted now at any time; a compost that will suit most of them should consist of two parts light loam to one of leaf soil. They may be packed for the present tightly together in a cold frame, the pots resting on a good bed of ashes, some Fern or material of a similar nature being worked in between the pots to preserve them from frost. The varieties of Pinks given earlier in these notes, such Carnations as U. Pike, Countess of Paris and Mrs. Miller, some of the Campanulas, Tiarella cordifolia, the improved varieties of Lobelia fulgens, Montbretias, Gypsophila, and some of the Funkias and dwarf Starworts rank among the really good things for pot work. They want careful attention as soon as they begin to move in the spring, and with the pots full of roots should receive weak manure water twice a week to keep the foliage right and to develop flower-spikes properly. If Daffodils are wanted in pots they should receive attention at once if not already done, a good batch being very acceptable pending the opening of outdoor flowers. If wanted principally for cutting, the early-flowering sorts will be most serviceable, otherwise a selection of good varieties for successional display can be made. If any of the above things, other than the Daffodils, are likely to be required for another season, it is advisable to set apart a small border for them and propagate at the proper time. It is not always convenient to lift things for the purpose from the mixed borders.

E. BURRELL.

Claremont.

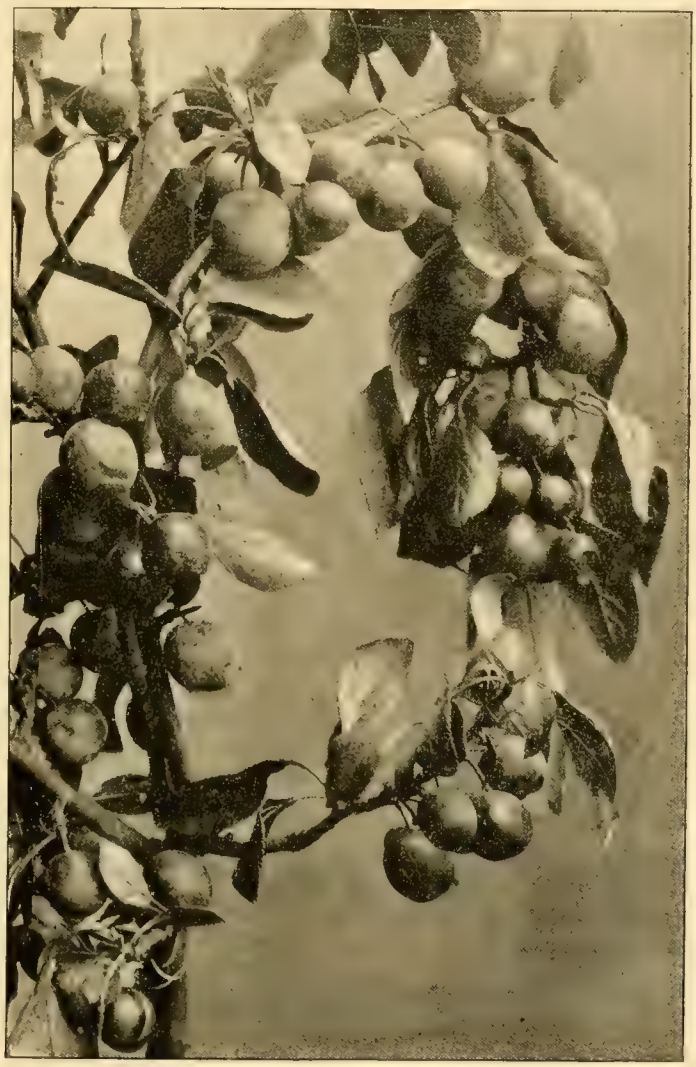
Pyrethrums: spring planting. — Many herbaceous Pyrethrums planted last autumn died off during the intense frost of January and February. I made a new bed, which was sadly crippled. On mentioning it to a friend who, by the way, is most successful in the culture of these flowers, he told me I had made a great mistake in planting in autumn. Even in winters far less severe than last many plants die off simply because they are lifted at the wrong time of year. Transplant in February or March. Do the work carefully, and 95 per cent. of the plants will

live, and if fairly strong will produce many flowers the first summer. As I find them invaluable for cutting and long-lasting when placed in water, I intend renewing the beds, acting on my friend's advice and planting in spring. Perhaps these remarks may prove useful to some who have hitherto been unsuccessful with these flowers and to intending planters, especially where the soil is heavy.—J. C.

Orchard and Fruit Garden.

DAMSONS.

It is some years ago since there was such a heavy crop of Damsons as this season, and it is possible there never was such a general big crop, with the consequent result—low prices, and the cry that the supply exceeds the demand, and that Damsons are an unprofitable crop. Such a statement is open to dispute, because in bountiful years like the present one, while some growers are at a loss by their Damsons, others make a moderate profit, though quite as far removed from good markets. It is always advisable when there are prospects of heavy crops of any kind of fruit to make some arrangements beforehand for the disposal of the same and take extra care in picking, packing and putting them on the market in the best possible condition. Those who have done this have not much cause for complaint with their Damsons. Prices, of course, have been low, but, considering the glutted markets, they have been rewarded for their labour by the enhanced value of the fruit. One large grower well known to me had many tons of fine Damsons that he had gathered before they became fully ripe, packing them carefully, and which realised £4 10s. per ton put on rail. This price paid fairly well, as there was no freight or commission charges to deduct, and as the trees were on Grass land, cultural expenses were very light. Another grower was offered £7 per ton for all his Damsons a few weeks before they were ripe. The offer was somewhat indignantly declined, as not being good enough. I saw a quantity of the same fruit when ripe sold by auction at 50s. per ton in one of the northern markets. Out of this had to come carriage, porterage and commission, leaving absolutely nothing for the sender after deducting cost of picking, cartage, &c. One of the greatest causes of these disappointing returns is the want of judgment in selecting markets and the unsuitable packages in which they are sent. There are certain markets which have come to be looked upon as the best and likely to take an inexhaustible supply; the result is they become glutted, while other towns of less repute are inadequately supplied. Packages play an important part in the value of Damsons; the half sieve and half flat are decidedly the best, as many householders will gladly purchase one of these small packages, which contain from 24 lbs. to 28 lbs. of fruit. As it is, many of the packages contain 56 lbs. and upwards each, and can only be bought by buyers who require large quantities.



Fruiting branch of the old English Damson. From a photograph sent by Mr. F. Rammell, Sittingbourne.

Not only so, but the fruit travels infinitely better in smaller packages, as the fruit does not heat or become crushed by its own weight, as it does in greater bulk.

No doubt there are some varieties of Damsons planted, or rather grown, that are practically useless for market as compared with some of the larger sorts. In North Staffordshire, Derbyshire, Nottinghamshire, and adjoining counties, some of the finest Damsons I have ever seen are grown, the variety finding most favour and usually met with being the old English Damson. Every farm and cottage in many villages has a few trees; in some cases the hedgerows are well stocked with large well-grown trees that bear immense crops. No pruning is done unless a branch dies or breaks with the weight of fruit, and the fertility is kept up by the cattle and horses that go under the trees for shade, leaving a good deposit of droppings behind them. When I lived in Derbyshire and Staffordshire I have heard many a farmer and cottager boast of having picked so many "strikes" (the local term for bushels) from such a tree, or from such an orchard, and sold them at a good figure. In some of the smaller holdings Damsons mean a good deal to the tenant by helping to pay the rent. As a hedge tree for profit, I think no fruit-bearing tree will approach the Damson, more especially in the midlands, as it succeeds so admirably, and produces good average crops that are easily sold to men who come round to buy for large consumers. The illustration is a good type of the old English Damson. Speaking from many years' experience of the variety, I question if any other sort will equal or surpass it as a standard in the open or in the hedgerows. The fruit is rounder than that of the King of the Damsons, though quite as large and heavy. Shropshire Prune, Crittenden, and King of the Damsons are all excellent varieties, the last especially adapted for bush culture, as it bears fine large, deeply-coloured fruit in a comparatively short time after planting, and forms a good break to the wind for other fruit trees.

I should scarcely recommend the planting of Damsons on an extensive scale alone as bush trees, but, as stated, they are splendid nurses for Apples, Pears, or other fruit trees, and will also pay for attention and good treatment generally. Another advantage is that all the eggs are not in one basket; if the Damsons fail one year the other crops may not, or if the latter do fail the former may be a success. Evidently some of our forefathers knew fully as much as we do on some points in fruit culture, as I could point out many orchards in the counties named that have a broad belt round the outskirts of Damson trees which have borne good crops, selling at £1 per strike or bushel in some years, while the Apple crop has been *nil* in the same orchard. Soil and situation appear to be of much less importance with the fruit under notice than any other kind, as it succeeds more or less wherever planted. Of course, the more fertile the land, the results are correspondingly good, but even on thin poor soil a great deal of assistance can be given by mulching with rich, partly decayed manure, also by applying sewage or liquid manure in the winter months. The effects of this stimulating diet are most marked in the healthy vigour of the trees and large fruit produced. Insect pest attacks are also reduced by this liberal treatment, as it is a well-known fact that these enemies always prey upon a badly-fed and weakly tree far more than upon one that is strong and vigorous, and I can confidently advise anyone that has been troubled with aphis or red spider on his Damson or Plum trees to increase the quantity of plant food to the roots, and spray the whole tree or trees with one pound of caustic soda and one pound of crude potash dissolved in hot water, and applied warm to every shoot, branch, and trunk now while the trees are dormant. This preparation will thoroughly cleanse them from all mossy substances and also dislodge and destroy immense quantities of eggs deposited on the trees.

W. G. C.

NECTARINES ON WEST WALLS.

A FEW years ago I planted half a dozen kinds of Nectarines on a west wall, thinking that on such a position it would be well to rely upon riders. I planted these a fair distance apart, with a dwarf, fan-trained Peach between each. The third year after planting most of these dwarf trees had to come away to allow the upper branches of the Nectarines more room. The soil being light and the trees on a sloping bank, much water is required during the summer, but to this cause and heavy mulching I attribute my success. The trees were allowed to grow freely, even strong lateral breaks from the large shoots were tacked in, with the result that a large space was quickly covered. Before the Nectarines were planted, Cherries had been grown on the wall, but owing to the border being so much drained, the trees flagged in hot sunshine and the fruit soon shrivelled. The position seems to suit the Nectarines, as there is no cracking, mildew, nor canker, and the wood at this date is almost equal to that under glass. I find with free extension we have no disease, there is no trouble with fly in the spring, and kinds can be grown on the west aspect which now occupy the south. By timely pinching of the shoots and regulating the crop, the wood is well ripened. Crowding of the tender wood of the Peach or Nectarine is the forerunner of mildew, green fly, and other diseases. I am of the same opinion as "E. M." (p. 303) as to the improved culture of late and the increased interest in Peaches, and I would add Nectarines also. I admit in some soils cracking of the fruits before they are soft is a great objection to the culture of Nectarines and Peaches in heavy clay land. Much may be done in the way of raised borders, planting standards or half standards so as to get the full benefit of the wall, and when planting, draining freely with brick rubble. Use the knife sparingly at the start, relying upon pinching to regulate growth. Of course, 1893 and this season have been exceptional years as regards warmth, but in 1894—a less favourable season—the trees fruited grandly and made good, firm wood. The varieties I tried were Advance, Early Rivers, Dryden, Spencer, Humboldt, and Pine-apple, with the older Lord Napier. All did well on the aspect named, thus proving their value for outdoor cropping. Though one or two trees have made less growth than others, all did well as regards quantity and quality of crop. G. W.

The Nectarine Peach.—Those who can give this variety of Peach an unheated house or merely glass protection will find it one of the very best for late work. I admit it is not one of the largest late Peaches, but it is much above medium size, and when its luscious, brisk, vinous flavour is considered, it is superior to many of our later varieties. The fruits are pale-coloured, with a smooth skin, hence its name. In a glass case it will furnish the early September supplies. On the open walls in a favourable position I have gathered good fruits early in October. For outdoor culture I do not advise planting it largely. The tree is hardy and free of disease when well treated. Of late years I have seen fewer dishes of this excellent variety. In the north it was a great favourite grown as advised.—W. M.

Gathering Pears.—Pears are often spoilt by premature gathering, for I observe a great many of those sent to market are more inclined to shrivel than to ripen. Many really good sorts of Pears get a bad name through being gathered too soon, so that they remain tough and shrivel, when they would have ripened up plump and juicy if allowed a week or more on the tree. There is not so much danger of making a mistake with the very early kinds such as Jargonelle, Williams' Bon Chrétien and others that are fit to eat a few days after plucking from the tree, but the case is very different with varieties such as Winter Nelis, Beurré Rance, Knight's Monarch and others that may be called winter Pears that must be in the store room several weeks before their proper season of ripening. I am well aware of the temptation to gather the fruit if it is grown on open trees, for rough gales blow them off and small birds peck holes by the stalk. On walls these valuable fruits ought to have a fish-net placed over them in October, when they are rendered safe from wind, birds and the slight frosts we get during that month. A week or ten days' exposure on the trees makes all the difference between ripening and shrivelling.—J. G., *Gosport.*

Pear Van Mons Leon Leclerc.—This is an excellent Pear and worthy of more extensive culture. Unlike many of the large sorts, it has a most refreshing and pleasing flavour. What is more, it does not go rotten in a week after it is gathered, a failing only too common in November-ripening Pears. If grown on a west wall it will hang a long time, as it is slow in coming to maturity compared with such sorts as Marie Louise, Thompson's and others. I have seen a fruit over a pound in weight in Essex and Suffolk, the finest dish I ever saw having been exhibited at Ipswich some years ago. I find the tree rather slow in coming into bearing, but when once it makes a start it yields more or less annually. It requires a wall even in the most favoured counties.—J. C.

Plum Reine Claude de Bavay.—In a recent issue, Mr. Young mentioned this Plum, and stated that it had ripened well with him this season. Its tardiness in ripening is its one great drawback, otherwise it is a Plum of exquisite flavour and fine appearance. It is next to useless trying to ripen it in midland counties, and even in the south of England it is often disappointing except on very warm walls. It is, however, just the Plum for an orchard house, as on well-ripened wood fruit sets freely and is not subject to dropping at stoning time. The finest crop of Reine Claude de Bavay I ever met with was on a pot tree, which was grown in an ordinary span-roofed greenhouse until the fruit had stoned, after which, being wanted by a special date, it was placed in a Cucumber house to finish. The manner in which the fruit there swelled proved plainly that it was a heat-loving Plum.—J. C.

Apricot Hemskirk.—Apricots fail so often, that any variety which sets freely is worth a note at the planting season. With me Hemskirk of late years has taken the place of Moorpark, a variety noted for its splendid quality, but, unfortunately, one of the least reliable. As it cankers so badly, one can rarely get a full-sized tree without losing a large portion when least expected. I admit there are large trees of Moorpark in various parts of the country, but they are rare. Hemskirk does not thrive in all soils, but where Apricots do fairly well it is one of the best, and I find it is hardier than Moorpark. Hemskirk is a large Apricot, early, very juicy, with a rich flavour. This variety grown on a west aspect with raised borders loses very few branches.—S. H.

Trays for storing fruit.—At a recent meeting of the Royal Horticultural Society the fruit committee awarded a silver Banksian medal to Mr. H. C. Orr, Bedford, for his patent storing trays for fruit. In a season like this when fruit is so plentiful it is an excellent invention. Each tray holds half a bushel in a single layer, and is made of light wood, each fitting one on the other, so that they may be placed to any height, remaining firm and allowing a free circulation of air all round. The shelves, made of strips of wood at the bottom, are light, and admit of the fruit drying freely. The trays could doubtless be improved upon if they could be drawn out separately. Now each tray has to be lifted off before the under one can be examined. For places where space is an object these fruit trays will be found most useful. They are admirable for seed Potatoes when the fruit is over. Stored in these the sets will be ready for planting and in nice condition. There are other purposes to which they may be applied, and they may be occupied at all seasons of the year.—G. WYTHES.

*** Are not these trays the same as are used by our large Daffodil growers for storing and drying their bulbs previous to replanting? The trays used for this purpose are well suited for fruit storing when not otherwise employed.—ED.

PEACHES IN POTS.

WILL Mr. Wythes kindly tell me which he considers to be the best two Peaches for a small house to come in in succession? I want both quality and size. Likewise the best two Peaches for pot work and one Nectarine. I had thought myself of Hale's Early in pots, to be followed by Royal George and Bellegarde planted out, followed by Princess of Wales Peach and Humboldt Nectarine in pots. By having three in pots I could prolong the season considerably, as the trees could be stood outside at certain seasons. The house is 12 feet by 14 feet, but very lofty, borders inside. I want most of the fruit to come in from August to October.—YORKSHIREMAN.

*** Your selection is a very good one, Hale's Early being one of the very best. It is not one of the largest Peaches, but it is above medium size when well grown and of excellent flavour, the tree also having a good constitution. I like Early Grosse Mignonne. It must not be confounded with the old Grosse Mignonne. The true kind is rare, has globose glands, large flowers, and the fruit ripens much earlier than that of the older kind. It is a grand early Peach, good for forcing, the fruit, which ripens a few days later than that of Hale's Early, being of fine flavour. Under glass to follow it, Royal George is excellent in every way. I do not think you could have a better selection. Bellegarde planted out to succeed those named should answer your purpose, with Princess of Wales, a late, handsome Peach, also planted out. I do not advise Princess of Wales in pots; I prefer Barrington or Stirling Castle. My selection would be Hale's Early or Early Grosse Mignonne for first crop, followed by Royal George and Bellegarde, with either Lord Napier or Humboldt Nectarine, a splendid variety, good in pots or otherwise. To come in in October, Barrington would do well. Dymond would also suit your purpose. It is a good pot tree and excellent in a cool house. I have named these in addition to the others to give you a good selection, and have considered size, quality, and cropping as important details. The Nectarines are noted for their good qualities. This year Humboldt has been grand, and, like its parent, Pine-apple, it equals it in flavour and the fruit is much larger. For pot culture you may rely upon it or Lord Napier, which is earlier.

With regard to the culture of pot Peaches and Nectarines, I would advise purchasing this year good trees, specially grown for fruiting next season. The trees will be more expensive, but this outlay will be balanced by the crop of fruit, as if you purchase trees from the open ground and pot up now you will not obtain heavy crops. The trees to do well should have been grown a season in pots, and may now be potted on or merely top-dressed. If in small pots, the former will be necessary. My mode of culture with pot trees is to pot up in October or early in November. Cost may be a consideration. In such a case I would advise "Yorkshireman" to select good trees at once, pot up and stand under glass, damping overhead till the leaves fall and keeping the roots moist. Such trees not being required to fruit till August will require to be kept cool, but if placed in the open the roots should be protected from heavy rains or snow, the pots being plunged over the rims. Of course, older trees, with due attention to root-preservation, may with advantage be placed in the open in the late autumn, and any repotting is best done just as the leaves turn yellow. Many rely upon top-dressing

one year, potting the next. In repotting remove the drainage and cut away the strong roots, repotting as firmly as possible in the same sized pots and merely protecting from heavy rains till required to start into growth. Trees grown thus may be wintered in the open till March, and treated thus make a cleaner growth than if kept under glass all the year round. Plenty of water and feeding are required to finish the fruits after top-dressing with rich manure. Repotting should be done with care, well ramming the soil, using good yellow turfy loam, mortar rubble and bone-meal with clean drainage. More attention should be paid to pot trees in the way of stopping and exposing the fruit. Stopping and disbudding are more important than with planted-out trees.—G. Wythes.

RIPENING OF PEARS.

Some of the so-called second-rate varieties of Pears can be greatly improved by special treatment. What may be termed artificial ripening is not only a means of considerably lengthening the season of notoriously bad keepers, but also of surprisingly improving the quality of some of them. Then, again, early and second early varieties are often left hanging on the trees too long, the result being mealy fruit, which only keeps a short time. Williams' Bon Chrétien is the most familiar instance of this. It is the behaviour of this and somewhat similarly constituted Pears that has given rise to the old saying, that one has to sit up all night in order to catch the fruit at the right time for eating. Now if the natural time of maturation of seeds or pips was anticipated by at least a fortnight and a portion of the crop gathered and ripened artificially, successional gatherings following every fourth day or so, every fruit from a large tree might be utilised and none spoilt. The most delicious fruit of this variety that falls to my lot each year is ripened a little in advance of its natural season. Souvenir du Congrès is also becoming popular hereabouts. This resembles Williams' Bon Chrétien in most respects, only it is later in ripening. Artificial ripening of a portion of the crop in this case again has the effect of improving the quality and also of bringing out the colour on this, to my thinking, grand September Pear. Late in August a friend ripened a grand dish of this variety which took two first prizes at local shows, and the last of the crop is before me as I write. Under high cultivation the fruit attains to sensational dimensions. Following upon the heels of this variety we have Beurré d'Amanlis. Left on the tree till the dropping stage is reached, quite the finest fruit of this variety is comparatively dry and flavourless, but gather when it can be separated from the tree without undue violence, ripen a portion of the crop artificially, and then note the lusciousness of the variety. Beurré Superfin treated similarly resembles a lump of butter in appearance and consistency, and is a most delicious Pear. Even Marie Louise d'Uccle can be ripened to such perfection, as to convince good judges that it is not altogether the second-rate variety many make it out to be. Louise Bonne of Jersey is justly considered one of the handsomest Pears in cultivation, but to bring out its beauty and good quality it should be artificially ripened. Much the same remarks apply to Flemish Beauty. Most of us affect to despise Duchesse d'Angoulême, and if the truth must be told it ought more often to be classed as a stewing Pear, yet I have recently tasted fruit that had been ripened artificially which was far from being tough or gritty. It was eatable in fact and of a bright orange-yellow before being skinned. Beurré Clairgeau ripened artificially is perhaps one of the most attractive varieties in cultivation as far as appearance goes, and those who have a heavy crop of this naturally highly productive Pear should ripen a portion artificially. If, then, they were not satisfied with the improvement effected in this naturally coarse variety, they would yet be able to sell the fruit more readily than they would fruit of sorts much superior in point of quality, only not so showy. That great cropper, Beurré Diel, if allowed to ripen naturally is not always eatable, but some that I have already ripened artificially by way of an experiment are both taking in appearance and buttery. It does not follow that I recommend ripening this variety thus early, as in most seasons we are glad to keep it for use late in November, that is, when better varieties are becoming scarce. My idea was to see what could be done with the produce of one extra fine tree. Even the Vicar of Winkfield, good stewing Pear as it is, can be ripened so as to fit it for the dessert. Josephine de Malines, Beurré Bachelier, and a few other late Pears, including Chaumontel, will not always ripen satisfactorily under ordinary conditions, but may be brought to perfection under artificial treatment. In the case of Pitmaston artificial ripening does not wholly get rid of the unpleasant acidity observed in the case of naturally ripened fruit, but I have observed an improvement, and any way should think it desirable to ripen a portion of a heavy crop artificially. Durondeau, Marie Louise, Doyenné du Comice, Comte de Lamy, Fondante d'Automne, Passe Colmar, Maréchal de la Cour, Brown Beurré, Beurré Hardy, and a few others that could be named usually ripen to perfection under natural conditions, but that is no reason why a portion of a heavy crop should not be ripened artificially with a view to having a longer succession than can be had otherwise.

I have yet to explain what I mean by ripening Pears artificially, and to describe what appears to be the simplest and best method. It is low temperatures that prove most injurious to the quality of Pears, and subjecting them to these does not even greatly aid in keeping the fruit to any great length of time. Store, therefore, in a comparatively warm, dry room and guard against any great fluctuations of temperature, further improving the quality and hastening the ripening of a portion of the crop by placing them in boxes lined with flannel or sheets of cotton wool, and transferring to a heated forcing house or a kitchen. Placing Pears in a kitchen drawer also answers admirably. Some that I have recently ripened to perfection were wrapped separately in paper and then packed in cotton wool, a small square hamper being used for the purpose of holding them. This was set at a short, yet safe distance from a kitchen fire long enough to get all warmed through, when they were moved a little out of the way and left alone for about a week. When opened most of the fruit was ready for eating, and, as before hinted, proved to be highly satisfactory both as regards appearance and quality. W. Iggulden.

Apple Bramley's Seedling.—I notice in a recent issue "E. M." complains of the barrenness of this variety when in a young state. The experience of most gardeners who plant Bramley's Seedling is the same; indeed, there are large trees in this neighbourhood which bear very indifferently, one fine healthy specimen in my own orchard planted some fifteen or sixteen years ago having borne only one respectable crop. There are only about a dozen fruits on it this season. In the neighbourhood of Southwell, where it was raised, the soil suits Bramley's well, quite young trees yielding plenty of fine fruit. No one can find the least fault with either the size, weight, or quality of this fine Apple, and it keeps well till May, retaining its weight as well as Mère de Ménage, which is saying a good deal. According to my experience, a more reliable Apple to plant by those who wish for a profitable and quick return is Lane's Prince Albert. Bramley's is all very well for those who can afford to wait, as in the case of the Blenheim Orange. I consider Blenheim the more constant variety of the two after it once commences to bear, although, of course, the fruit will not keep anything like so long as that of Bramley's.—J. C., *Newark, Notts.*

Tomtits and fruit.—I can fully sympathise with Mr. Sangwin (page 318) in his struggle with these mischievous pests. They do not generally make their appearance in this garden until late in the autumn, when they make a raid on any Apples or Pears which may happen not to be netted. Only to-day I discovered that holes had been made by tomtits in several of the largest fruit of Beurré Bachelier hanging on an upright cordon on a wall. Of course the fruit will go rotten very quickly even though the hole is ever so tiny. In several gardens in Norfolk surrounded by large woods tomtits are a veritable nuisance, for in spite of covering the trees with nets, the birds contrive to reach the fruit, generally selecting, as Mr. Sangwin says, the finest and best. A single herring net hung over the tree is not sufficient, as the tits are so small that they force their way through the mesh. To keep them out, the net should be hung double, and this of course keeps a great deal of light and air from the trees.—J. C.

FRUIT-FARMING.

At page 329 Mr. G. Barham draws attention to the exorbitant charges of railway companies for the carriage of fruit. In the case quoted, three times the value of the article carried was charged for a journey of forty miles, and it is no uncommon remark, and one that is perfectly true, that anyone having an orchard fifty miles away will find it better policy to let the fruit lie under the trees and rot, and buy what he wants in the locality he is staying in. I could mention gentlemen in this locality who are doing this. We are continually hearing that something is going to be done for the long-suffering farmer, but if it is in the direction of fruit-farming I fear a good many things will need re-adjustment before better times will come. This has been an extraordinary year for Apples, but I doubt if many of the growers are much the richer for it. Heavy crops mean a good deal more expense in the way of labour for gathering, marketing, &c., and unless a market could be found near enough for carting, a railway journey would in nearly every case result in a positive loss; and growers who are situated at long distances from large centres of population are very much handicapped, for the profits of their labour do more to swell the dividends of railway shareholders than to fill their own pockets. Apples have been such a general crop that they are equally cheap in all parts of the kingdom, and if one cannot find a market close at home it is useless consigning them to a distant market. Other fruits have not been so evenly distributed, and in some parts Pears are scarce, but here the same difficulty meets the grower. If he can sell in his own locality all well and good, but if it means a long journey by rail the question is, what will he get by the time rail charges and market expenses are paid? Pears succeed well in this neighbourhood, nearly all kinds coming to perfection on open bush trees without the aid of walls, but it would be hazardous work to grow more than could be sold within carting distance, for our railway accommodation is a close monopoly, and no one appears to understand on what rule the charges are made. The question for anyone contemplating planting on a large scale would be, not so much the possibility of growing good crops of Pears almost every year, but whether he could dispose of them at a living profit. It seems strange that Parliament, having the power to grant to these railway companies a monopoly of the carrying traffic, appears to have no power (or else does not use it) to inter-

fere when these monopolists are strangling the home trade, as they are doing in the case of fruit. Happily there is a great improvement in orchard fruit culture, and those planted within the last twenty years are now coming to yield fine crops, but we cannot expect this improvement to go on, and orchards to spread far and wide, if there is no cheaper means of transit provided. We have been told that cheap light railways for goods traffic would do great things for Ireland, and it appears to me that something of the kind is needed in England.

Gosport. James Groom.

VINE NOTES.

The majority of gardeners are very seriously handicapped at this season and later on by the primitive means at their disposal for storing Grapes, the rooms or other places in which they have to place the bottles being utterly unsuited for keeping the berries sound and plump. Judging from what I have seen in many gardens of moderate size, a vast quantity of Grapes is spoiled annually by the unsuitable structures in which they have to be stored. During the past two winters I know of one establishment where the Grapes and bottles of water were frozen together, and when the thaw came the bottles burst wholesale, and what had been a fine lot of Grapes was completely spoiled. In this case the gardener could not help himself, as this room was the only one he could have, and there was no convenience for a stove or other means of excluding frost. In another instance the Grape room is over a stokehole, and the heat from the fires and boilers quickly shrivels the berries, making it a continuous worry for the poor gardener, who is expected to supply good Grapes for a long period in the winter. It might, perhaps, be advised in such cases to allow the bunches to hang on the Vines to the latest possible date, but where a large quantity of plants has to be put into the vineries on the approach of cold weather, the moisture continually arising quickly causes mould to set in, followed by considerable loss. Here is another point that comes in, viz., is it not beneficial to the Vines to have all the fruit cut as soon as the foliage has fallen? I think it is advantageous in several ways, not only in the reduced risk of the Grapes decaying if plants are in the vineries, but the Vines can be pruned at once and the houses cleaned and made ready for starting again. On a light soil liquid manure can be given the borders, furnishing the soil with plant food that can be taken up by the roots when activity commences again. We all know how carefully watering must be done in the winter with Grapes hanging on the Vines, and this system of supplying less moisture to the borders while the root action is practically at rest is opposed to all natural conditions. It is a query how many Vines are seriously crippled or injured by the Grapes hanging on the rods until late, and the consequent inadequate supply of water to the roots to maintain them in a healthy state. Again, if the Grapes are all cut and bottled at the earliest possible date, the Vines can be pruned, and if no plants are in the vineries a low temperature can be given that will afford the Vines a rest. Such a thing as the Vines bleeding is unknown according to my experience if thus pruned and treated. I believe few, if any, people now turn out their Vine rods through the front ventilators, as done in my days of probation, nor do I think there is any wisdom in thus exposing the rods to cold, wet, and frost, as I have seen Vines so treated die back and refuse to start into growth again when required to do so. It is far more rational to keep them inside, throwing open all the ventilators on every suitable occasion, thus avoiding any excitement to the Vines, and preventing them starting prematurely.

Where insect foes have been troublesome, the next few months will be a suitable period to eradicate these enemies, starting with the Vines first. All loose bark that will come away without the aid of a knife is best removed, scrubbing each rod immediately it is thus cleaned, thereby killing the insects exposed before they can find fresh cover. Any of the well-known insecticides will be suitable for the purpose if applied as directed by the vendors. If mildew has appeared on the bunches or foliage all the glass and woodwork should be thoroughly washed with soft soap and hot water, the walls also limewashed and the surface of the border removed and top-dressed with good fibrous loam and bone meal. Thorough cleanliness is one of the surest and best preventives of all insect or fungoid attacks, and should be insisted upon as far as possible. W. G. C.

Keeping Plums.—It is surprising how long Coe's Golden Drop Plum may be preserved in an eatable condition by placing the fruit on a shelf in a dry warm greenhouse or fruit room. True the skin is apt to shrivel somewhat, but the flavour remains all the same. I have also seen the Wine-sour Plum kept for a November exhibition by cutting small branches on which the fruit hung, and thrusting 6 inches of them into a Mangold Wurtzel, the moisture of which kept the Plum wood in a plump condition and the fruit from shrivelling. Grapes may also be kept for a long time by the same means.—J. C.

Outdoor Grapes.—The Vine which produces the Valencia Raisins of commerce is a fleshy Muscatel, very similar to the Muscat of Alexandria. It is grown in the environs of Denia and Jabea, between Alicante and Valencia. From my personal experience of these two places, I should think it is almost as likely to ripen here out-of-doors as the Date or the Banana. The loosest bunches are those of the Muscatels, but they will not do for outdoor work here. The solid clusters referred to by "A. D." are natural to the Vine, and have nothing to do with the cool conditions. In France, in Spain, in Italy, and America, where Grapes are not thinned, they are always in clusters and very small. I have ripened outdoor Grapes this year against the walls—but when shall we have such another year? I believe there is a small and delicious Grape that is produced on a Parsley-leaved Vine that would ripen here with a little trouble. I have seen it in France and Guernsey, where there was no market for it, by reason of its insignificant appearance.—J. W. Shaw, *Lingfield.*

—— I enclose a small bunch of Black Hamburgh Grapes to show you that Grapes can be ripened out of doors in Cheshire upon a cottage wall. Even last year I cut some bunches of ripe fruit. Good fruit could be had out of doors on cottage walls in the south of England, but not from such worn-out Vines as I have seen in Hertfordshire. The Vine from which the Grapes sent were cut was planted in 1889. It is planted on the south corner of my cottage and trained horizontally, the rods 18 inches apart. The cottage roof has about 2 feet of a projection, which throws off rain and in the spring protects the tender foliage from frost. The laterals are pinched two leaves beyond the bunch and all other lateral growth is stopped. This allows plenty of space for the foliage and ripening of the wood. I have never seen any mildew on the Black Hamburgh out of doors here. Old pot Vines may be made good use of for planting on walls or trees. Vines will cover a wall more quickly than many other plants and to a greater height.—Alexander Trail, *Fulshaw Hall, Wilmslow, Cheshire.*

—— I regret that I cannot give "A. D." any information with respect to the suitability of the Valencia Raisin Grape for outdoor culture in this country, but in any case I should not advise the employment of seedling plants. I once raised young plants from seed taken from about thirty of the best French vineyard Grapes, and not one of them was equal to the parents, the greater portion having berries so small as to be worthless. Probably one of, if not the best, kinds for open-air culture in this country is the Gamin Noir. This is the Grape found to succeed best in the vineyards of Northern France, and the one of which the Marquis of Bute's vineyard is composed. Other Continental kinds have, I believe, been successfully grown at Chiswick, and those intending to plant should try several varieties.—J. Cornhill.

SHORT NOTES.—FRUIT.

Pear Emile d'Heyst.—This from a pyramid tree was quite ripe at the end of August. Last season it did not ripen until the third week in October. Can any reader give a reason for this?—J. C. Clarke.

The Mother Apple.—Mr. Bedford, of Straffan House Gardens, sends us good examples of the Mother Apple, and writes to us, praising it as an Apple of fine flavour during the last half of September and first half of October—as good for that time as Cox's Orange Pippin.

Pear Princess.—It may interest "S. H. B." to know that this Pear does well as a horizontal cordon away from a wall, the fruit coming very fine and handsome. With me it bears as freely as Louise Bonne of Jersey and is superior to it in flavour, the flesh being more sprightly.—J. C. Clarke, *Taunton.*

Garden Flora.

PLATE 1039.

ROSE NARCISSE.

(with a coloured plate.*)

A charming Rose that is hardly ever seen either in gardens or Rose nurseries is the subject of our coloured plate. It is a very old variety, sent out by Avoux and Crozy in 1858, and even now it loses nothing by comparison with the best Roses of the last decade, and is altogether too good to be lost sight of or neglected. As we have often said, Rose exhibitions are of little use in helping us to find out the best garden Roses, and the complexities of Rose classification assist in burying not a few first-rate kinds in comparative obscurity. Some will place Narcisse among the Teas, others among the Noisettes, and the descriptions that are given of it give a very faint idea indeed of its many merits, owing to the exclusive standard of merit by which the majority of Roses are judged. We have even now only a few yellow Tea Roses—for Narcisse is as much a Tea as any Rose in that section—that can be trusted to flower well and freely under the varying conditions of sunshine and rain that make or mar our Rose seasons, and not only to flower, but to give great clusters of bloom where the conventional show Rose gives but one. In this variety two extremes meet, for whilst in stature it is one of the dwarfest of all the Tea Roses, it flowers so profusely, that it will not be exaggerating its merits in the slightest degree to call it a miniature Lamarque, as it is a miniature counterpart of that grand old Rose in all respects except that of the colour of its flowers, which, instead of being snow-white, are a soft canary-yellow, shading to a cream tint as they age and expand. Although dwarf, there is no suspicion of tenderness or delicacy, but it makes strong, short-jointed shoots and thick spreading bushes about 18 inches in height. Every shoot is terminated by a cluster of flowers, as shown in the plate, the number varying from three to twenty or more, according to whether the shoots are laterals or leading growths. The bursting and half-expanded buds and a full, open flower, as represented in the plate, show the form and character of the Rose, and it is second to none as regards a long-sustained season of bloom. In this present autumn,

* Drawn for The Garden by A. F. Hayward at Gravetye Manor, Sussex. Lithographed and printed by Guillaume Severeyns.



ROSE NARCISSE.

which has brought us one of the finest autumnal displays of Tea and other Roses that we have ever seen, Narcisse has contributed its quota of blooms, and at the time of writing (October 5) is still gay with many buds and blossoms. The Rose named Enfant de Lyon is synonymous with Narcisse.

The Week's Work.

KITCHEN GARDEN.

The root crop.—There will be a good deal of work now amongst roots, as lifting will have become general, and, although Carrots and Parsnips are fairly hardy, they are not improved by being frozen and refrozen, to say nothing of the labour and inconvenience of getting to the roots when the ground is hard. Sometimes severe weather sets in quite unexpectedly and at an early date, taking the gardener off his guard. Temporary covering is then necessary, as the roots cannot be lifted in a frozen state. Beetroot does not stand more than 7° or 8° of frost, and this week, owing to sudden and severe frost, I have mown the Asparagus beds and covered the Beet with the growths. This forms a capital protection, and the Beet will take no harm till the frost goes. As the intermediate forms of Carrots will be used first, the Long Red Surrey and Altringham should receive a little more attention in storing, more soil being laid between each layer of roots than in the case of the shorter varieties. Where a good many Parsnips are grown, and it is certain that the supply will hold out till spring, a portion may be left in the ground, a little soil being drawn up to the roots with the hoe. For general winter use I prefer to lift and lay them in up to the crown in a sheltered nook or corner, and then to cover with a good thickness of Bracken. Lay them in as closely together as possible in the rows, treading the soil between each lot firmly. When treated thus they retain their flavour and firmness, and can be got at easily, even in the hardest weather. Salsafy and Scorzonera may be treated exactly in the same way, but in the event of very hard frosts, more covering will be needed than for Parsnips. Jerusalem Artichokes retain their flavour better if left in the ground, and although it will be necessary to lift a portion of the crop and store in root room for present use, the remainder of the bed may be covered with Bracken or litter, that the roots may be easily dug later on.

Onions.—Take advantage of wet or snowy days to overhaul the stock of Onions and remove all decayed bulbs. Any just showing signs of going should be laid by themselves and be used soon, as there is seldom time for stringing when the crop is harvested in September. A percentage of the best bulbs should be done, and suspended from the roof on wet days when outdoor labour cannot be proceeded with. The remainder can then be spread out thinly, so as to get the benefit of more air. Although Onions prefer a dry atmosphere, thorough coolness is essential; lacking this, the bulbs soon lose weight and often decay, especially if not very well matured. Those lying on floors are the better for being turned over once in three weeks. The first time the ground becomes fairly dry go over the autumn-sown beds and firm them well, as if much frost catches them when in a loose condition, it injures the young bulbs, especially on heavy soils. Before firming these run the Dutch hoe between the rows and remove all weeds, drawing a narrow rake through them after firming is completed. Apply soot and wood-ashes in equal quantities, as, although the grub does not usually attack the bulbs at this season, by incorporating this mixture with the surface soil there is less liability to attack during March and April. Moreover, on warm sandy soil soot is beneficial amongst Onions applied at any time. While speaking of firming Onion beds I may mention that it is also needed on breadths of autumn-planted Cabbages, as many of them are sure to be loose. After making firm draw a little soil to the stems to steady them till the spring.

Turnips.—It will be wise to lift all Turnips which have grown to their normal size except Chirk Castle, which is so hardy that it will endure almost any amount of wet and frost without decaying. Turnips keep best if clamped similarly to Potatoes, but covered down a little less heavily, as heating in mild weather causes top-growth and general deterioration.

French Beans.—Choice summer vegetables having now disappeared, it behoves all those who have the convenience to get in a good batch of dwarf forcing Beans. When speaking of the first batch a few weeks ago I mentioned an 8-inch pot as being suitable, but that size should no longer be used, a 6-inch being of ample size. Sow Osborn's Forcing, Sutton's Dwarf Forcing, and Sion House for the next three months, and allow five, or at the most six, plants to remain in the pot after thinning has been performed. Where there are any strong wide shelves in light houses and tolerably close to the glass, the best plan is to grow the Beans in shallow boxes similar to those used for striking Geranium cuttings. Drain them well and mix a little rotten manure or quick-acting fertiliser with the loam, as the rooting medium being so limited there need be no fear of sourness, and the roots are able to assimilate the whole of the nourishment. As before stated, a limited root space and a light house which can be kept at from 60° to 65° at night are the chief essentials for successful Bean culture in the dark months of winter. I usually support the early batches with portions of half-worn Birch besoms, topping them with a sharp knife to give them a neat appearance. If not standing near hot-water pipes the soil will only need one gentle watering until the Beans are through the soil. Repeated doses before germination takes place are sure to end in decay. Where a fair amount of atmospheric moisture can be maintained, Beans are best without being syringed overhead at this time of year.

Protecting Parsley.—If a supply of this has not been got into pits or frames no time should be lost. Several months ago I advised pricking off plants from a summer sowing into a spare pit, so as to get established plants, as such are not so prone to damping as are those lifted at the present time, thus receiving a check. Expose fully in fair weather, and hand-pick and surface-stir occasionally. If any bed of a choice strain is wanted for seed next summer it should also receive a temporary protection, as severe frost cripples, if it does not kill it. Erect a rough framework over it, and roll mats or canvas along each evening in bad weather. The same kind of screen will be needed for young Lettuces left in seed beds, as the warm weather in September caused a soft, sappy growth, which will stand but little frost. Let plenty of Bracken be got into the frame yard in case of sudden need. This is most useful for putting over frames containing Endive, Cabbage, and Cauliflower.

Broccoli.—As a rule, Broccoli for mid-winter use is much less grown now than formerly, and no wonder, as it is a very precarious crop, and if it fail through frost, gardeners with only a limited sized kitchen garden are placed in an awkward position. In such gardens the ground had better be planted with Rosette Colewort, and then there is always something to cut at, no matter how severe the weather may be. In most places, however, both Autumn Giant Cauliflower and Self-protecting Autumn Broccoli are regarded as indispensable, as by watching them and lifting in time, the latter will afford a supply till Christmas. The forwardest rows of this Broccoli, with heads the size of tea-cups, must now be lifted with as much soil attached to the roots as possible, and laid in, in leaf-mould or soil, in cool frames, pits, or open sheds, where the necessary slight covering of Bracken or litter can be given in case of prolonged frost. I have seen Broccoli kept for a long time in cold, shallow brick pits, and covered with straw hurdles made on the premises in wet weather. These straw hurdles are capital things for using over beds of Lettuce, Cauliflower, Cabbage, and early Endive growing in the open borders, boards being placed on edge along the ends and sides for the hurdles to rest upon.

Heeling in Broccoli.—This is commonly practised with such sorts as Snow's and other winter varieties, and consists in first taking out an opening at the north end of the brake and then forcing the spade under each plant and levering it over, banking the soil from the next trench over the stems. Even then it is advisable in low-lying gardens to leave a pathway here and there, so that litter can be carried down and laid over the foliage in times of unusual severity. I have found Veitch's Model stand most winters without any protection. The same may be said of Cooling's Matchless Spring and Methven's June, a late Broccoli of great merit. J. Crawford.

FRUIT HOUSES.

Early Peach houses.—With such a favourable autumn for ripening the wood there is a prospect of good crops next year, and as far as my observation extends there should be less bud-dropping than usual if the roots have not suffered from want of moisture and the trees have been supplied with abundance of air. The leaves in early houses have now mostly fallen, and the longer the trees can be exposed the better, a touch of frost being beneficial. In many places fruit houses have to be utilised for Chrysanthemums whilst in bloom, but these plants should not be allowed to interfere unduly with the trees, as if much excited at the resting season bud-dropping later on will be troublesome. When plants are stood in these houses it often happens the borders get much moisture from watering just in one place, while near the stems the roots are quite dry. This should be avoided, also treading or puddling the border in any way. Trees on which the leaves hang long may be lightened by shaking or drawing the hand up the shoots. I do not advise brushing off with a broom, as the buds when prominent are soon injured. Strong shoots at all green or late-planted trees may require a little fire heat with plenty of air to ripen the wood, and in such cases it is best to expose as much as possible. Trees fully matured may now be partially untied from the trellis, thus getting more light and air and be made ready for pruning.

Cleansing and pruning will be the necessary work in early forced houses, as many require to start them at the end of November or early in December. There is no better time to do necessary repairs, painting, and limewashing, the last important, as it adds to the appearance and at the same time destroys all insects that may be in the crevices. Cleansing of the paint and trellis or ironwork is equally necessary, well brushing the same with soft soap and warm water to remove brown scale or other pests. Some kinds are not so robust growers as others and need a different style of pruning. If these latter have much small wood and are at all subject to bud-dropping, the knife must be used sparingly and a greater quantity of small twiggy wood left, as it often happens this small wood will furnish a crop when the stronger fails. Such Peaches as Alexander, Waterloo, and Hale's Early are more subject to bud-dropping than others. The same remarks apply to Nectarines Lord Napier and Elruge, these often bearing best on the small greenish looking spray, the stronger well-ripened shoots casting their flowers. If previous calendar notes have been followed in the way of cutting out the old fruiting wood and crowded shoots as soon as the trees were cleared of their fruits, pruning will not take long. The chief work will be thinning out. By summer pinching there should be an absence of gross shoots, but at times they may be overlooked. These must not be allowed to remain unless it is necessary to make good any gaps caused by canker or disease. In pruning it should be the aim of the cultivator to keep the trees as evenly balanced as possible, and if there is an inclination to grossness, this must be remedied by removing the coarse shoots, allowing the smaller wood more freedom. In cutting back strong

growth, make a clean cut as close to the parent branch as possible. It is always difficult to advise as to length of bearing wood left, so much depending upon the age of the tree. I am an advocate for extension, but, of course, when certain limits are reached there must be more knife work if pinching has been neglected. In the majority of cases the fruiting growths may be left 18 inches to 2½ feet long and as near the main shoots as possible, removing any wood on which there are no buds to make room for new wood, shortening the shoots to a triple bud whenever possible. Smaller shoots will not require shortening, but should be treated as fruiting spurs. Weak, spindly growth, left specially to provide fruit in case of the stronger wood failing, may be cut back if too long. In many cases it will not be necessary, as any not required to fruit may be removed when disbudding. Unless the trees are small, it is not advisable to remove all ties from the trees, as the main branches will need support to prevent the trees being broken. In cleansing it is well to tie a number of shoots together so as to avoid rubbing off the buds, which are very prominent this season.

DESTROYING INSECT PESTS.—The Peach and Nectarine, in common with most forced fruits, soon get infested with insects if not well managed. In all cases it is advisable to thoroughly cleanse at this season to prevent the enemy gaining a foothold. Mealy bug is doubtless the worst pest. Many advise paraffin in a raw state mixed with tepid water, but this in inexperienced hands becomes dangerous. Soluble paraffin is a safe mixture and, unlike the raw oil, does not float on the surface; it is excellent for syringing to clear the trees from bug, and there is no better wash than this mixed in tepid rain water, well brushing it into the crevices. If ordinary paraffin is used, it should be first mixed with soft soap to make it soluble. For brown scale, Gishurst compound, an old remedy, but a good one, may be used. For red spider the same remarks apply. I have found it advantageous to paint the old branches and bark of badly infested trees. This often reaches any portion missed with the syringe and does the trees good. The wood of this year need not be covered and the paint may consist of Gishurst, clay and a little sulphur, with sufficient water to make it the thickness of ordinary paint.

LATER PEACH HOUSES.—It is not too late to remove any trees to make good those not in condition, or to substitute another kind. Such trees need to be home-grown so as to be lifted at once and get a good ball of earth and roots. Trees from open nursery quarters will not bear forcing, whereas the above will if lifted carefully. Young trees from a distance may be used to fill up the wall spaces in the open. The late trees should now be exposed as freely as possible and care taken that the roots are in a moist condition; any borders found dry when replanting should get copious supplies of water. The leaves as they change colour should be removed. By clearing up frequently much insect life is destroyed.

WINTERING POT STRAWBERRIES.—I like these to be left in the open as long as possible if the weather is not too wet or severe, as the frost in a measure prepares the plants for forcing. Excessive rainfall is injurious, and must be guarded against. The chief drawback in delaying housing or protecting the plants is that sudden frosts soon injure the tender roots, and often one cannot conveniently house just at the right moment. By placing the plants in houses they often suffer and get infested with green fly; if placed in Peach cases or in cool fruit houses a thorough watering overhead will be of great benefit, also giving as much light as possible. Strawberries will not stand coddling. A thorough rest is essential, and, so far as my experience goes, there is no better means of protection than cold frames, plunging the pots in ashes, leaves or fibre. The sashes can be thrown off in fine weather and the plants freely exposed. The older plan of stacking is now not much practised. I used to winter the plants in this way, having a great number, but do not advise it, as the plants get too much dried in severe weather, and when required at certain times to force cannot be moved, being frozen in a mass. A good plan is to plunge well over the rims of the pots if they cannot be given frame protection, and on a well-drained or sloping border this is preferable to stacking. I treat the latest lots in this way and house the earlier and midseason varieties in frames, plunging in ashes and exposing freely till wanted.

LATER PLANTS FOR FORCING will need more care than those full of roots and their growth finished. These should be given the best place, but free of warmth. In some gardens, owing to the drought, it was difficult to get early runners, so that there may be a larger percentage of late-potted plants this season. These will well repay cool house or frame protection, and should be kept moist at the roots, as premature ripening off will cause weak bloom. Any small plants left for spring planting to provide stock should likewise get timely protection. These will do well plunged in a warm border, and will then start early into growth. Plants grown in beds intended to lift and pot up may with advantage be well trodden round in light soil, and all bad leaves cleared away from the crowns to ripen them. G. WYTHES.

NOTES FROM GUNTON.

GUNTON is at all times well worth a visit, but never more so than during August and September, when the fine old trees are taking on the autumn garb, and fruits, vegetables, and hardy flowers grace the well-kept gardens and pleasure grounds. Everything is well done at Gunton, no special hobbies being indulged in. The Pear trees on walls, from which fruit has so often won first prizes at London exhibitions, are this season carrying grand crops of heavy, well-shaped fruit, Doyenné du Comice, Marie Louise d'Uccle, Glou Morceau, Marie Louise, and many other standard sorts being especially fine. Mr. Allan has had Doyenné du Comice from 18 oz. to 20 oz. in weight from south and west walls. Apple trees in espalier and bush form are carrying fine crops of fruit, Lord Suffield, Potts' Seedling (a favourite Apple at Gunton), Cox's Pomona, Fearn's Pippin, King of Pippins, and Ribston being conspicuous for size and beauty. As might be expected, young Strawberry plantations look remarkably healthy, Mr. Allan still adhering to his old plan of sowing his Onions 2½ feet apart and planting the young Strawberries between the rows at the beginning of August, thus having fine Onions and fine Strawberries, Gunton Park, Lord Suffield, and that delicious variety Empress of India growing quite as vigorously as well-known older sorts. Figs on open walls were badly crippled last winter, but trees on walls under glass and bush trees occupying low pit-like houses have this year yielded most abundantly; in fact, I never saw finer Negro Largo. The Gunton soil grows magnificent vegetables, and Mr. Allan is very enthusiastic in their culture, having a good many special strains of his own. His selected stock of Spanish Onion is, I think, the finest I have ever seen, its depth, weight, and general symmetry being exceptionally good. The Gunton vineries have for years produced splendid Grapes, some of which have taken foremost positions at leading exhibitions, and this year is no exception to the rule. I saw some grand bunches of Duke of Buccleuch on a Vine grafted on Black Hamburgh, and noble bunches of a new seedling black Grape of splendid appearance and very rich flavour, and which would probably have received a certificate from the Royal Horticultural Society, who thought highly of it as a late Grape, had not the raiser candidly confessed that it was a shy bearer. At the time of my visit the flower garden was looking well. As at Blickling and various other places in East Anglia, the formal style of bedding has been abandoned, fewer Geraniums and similar plants and more hardy subjects being used. This saves a deal of labour in propagating and housing, and at the same time gives a capital effect. Everybody has heard of the Gunton Violets, and this year the plants look as well as ever. The garden being large, the site for growing them during the summer is changed every year. Gentle warm beds are still employed for the principal lots after lifting them. J. C.

ORCHIDS.

DECIDUOUS CALANTHES.

THE flowering season of these extremely useful Orchids is once more close upon us, and in proportion to the care bestowed on their culture, the flowering return will now be satisfactory or the reverse. When we consider the many places in which these plants are met with in really good condition, often where scarcely any other Orchids are grown and where seemingly no special attention is given them, it would be absurd to say they were difficult to manage, and yet it is a fact that in many places where other and more essentially difficult plants are well done, Calanthes are not seen in anything approaching good condition. There are several things that tend to this unsatisfactory state, and I think I am right in saying that the most frequent cause of failure lies in the fact of their being kept too cool either while in flower or after the blossoms are past and the plants at rest. So much house decoration has now to be done in many places, that the stock of winter-flowering plants is seldom large enough to meet the demand, and if necessary the Orchid house has to be laid under contribution. The plants then are placed in living rooms that have the windows thrown open in early morning and are often injured by the low temperature thus caused. The amount of this injury is not even suspected at the time, for even if the flowers are damaged, the dry looking pseudo-bulbs of the Calanthes are apparently none the worse, and when in spring weak and miserable-looking growths are produced, the cultivator wonders what is wrong with the plants and alters his temperature, mode of watering, or some other detail, possibly to their still further disadvantage. Want of room in the warm houses, too, may sometimes account for the same backward tendency of the plants. It is better in all cases to leave the pseudo-bulbs in the pots in which they have been grown for the winter, but if room cannot be found for these in a house that does not fall below 55°, it is far preferable to turn them out and lay them thickly in boxes than to remove them to a cooler structure.

Many growers have their own favourite plan of starting the pseudo-bulbs. Some lay them on boxes or pans of Sphagnum Moss, to remain there until the young shoots begin to root; others prefer to pot them into small pots in similar material, repotting into larger sizes when these are filled with roots. I have tried these methods, but could never see any advantage from them, and now always pot them at once into their flowering-pots and rely upon careful watering in the early stages of growth to bring them safely through this period. The repotting may take place at any time after the flowers are past, but, preferably, before the plants begin to grow. If done earlier the compost must of course be kept perfectly dry for a considerable time, and this is why I prefer doing it later. In order to grow Calanthes strongly a much more substantial compost than most other Orchids require is necessary, and the bulk of this should consist of nice mellow, fibrous loam. Either a fourth of well-dried cow manure or a little of some approved artificial fertiliser should be added, while to prevent closeness, add plenty

of finely-broken crocks, charcoal and a little chopped Sphagnum. Good drainage is necessary, and over the crocks a very light sprinkling of half-inch bones will be of assistance late in the season when the roots have exhausted the food supplies in the compost. A little of the old root may be left on the bulbs, as this helps to secure them in position without burying them deeply. They should have the base about half an inch below the surface, and the number of bulbs placed in each pot will depend upon their size and the purpose for which they are required. If simply for cutting from, rather large pots are to be preferred, but for decoration they may vary, some of the smaller bulbs of C. Veitchi, for instance, being very useful if placed singly in 4-inch pots, it being easy to hide these with small pots of Ferns, Panicum, or other fine-foliaged plants. No water must be given until the young growths are well above the soil, and even then it is only necessary to damp them over lightly, always using tepid, soft water. As the roots commence to push out into the soil they may have a good soaking, and then be allowed to get quite dry. These waterings will be more frequently needed as the roots reach the sides of the pots. When the latter are filled, an abundant supply will be needed, and occasional doses of weak liquid manure are helpful when the new pseudo-bulbs are swelling. Soon after these attain their full size the flower-spikes will be showing at or near the bases of the bulbs, and when the sheaths surrounding these break, care must be taken in watering that they are wetted as little as possible. By the time the first flowers show colour, all the foliage will generally have fallen from such as C. Veitchi and most of the varieties of C. vestita, when the supply of water must be diminished, but not entirely withheld until the blossoms are over. The heat of the East India house is most suitable for them, and all through their growing season they must have as much sun as possible without scorching the foliage. They must have constant attention all through the summer, and will need frequent rearrangement as they grow, so that each plant stands clear of its neighbour, otherwise the foliage will be soft and flabby, and not of the kind that will give healthy pseudo-bulbs and vigorous flower-spikes. Scale often attacks the foliage of Calanthes, and if the atmosphere is at all dry, red spider may also be troublesome, but both these pests may be kept under by ordinary vigilance, the remedy being the same in each case, viz., timely and judicious sponging and careful balancing of the atmospheric conditions. Large pseudo-bulbs frequently produce two, or even three new growths, and by means of these the species are increased, but if a quicker mode of propagation is desired, each one may be cut vertically into three or four and placed at once in small pots of light compost in a propagating pit, when each portion will push a young shoot. Considerable care is necessary if this method is practised, and beginners in their culture should attain a certain degree of proficiency before commencing these rather unnatural operations.

H. R.

Oncidium hæmatochilum.—This very distinct and brightly coloured Oncidium is, unfortunately, very seldom seen. It is a moderately strong grower, with large spotted leaves, and does not produce any pseudo-bulbs. The flowers occur on stiff, erect racemes, and each bears a dozen or more, each upwards of 1½ inches across. The sepals and petals are brownish yellow, with spots varying in colour from rich crimson to chocolate, and the lip is light crimson, spotted on the edge with dark brownish purple. This species thrives well in suspended baskets in a compost consisting largely of Sphagnum Moss, a very little peat and a few lumps of charcoal being added thereto. During its growing season a moist atmosphere and fairly high temperature may be given it, and plenty of water is needed at the roots. After the flowers are past very little water will suffice, and the temperature may also rule considerably lower, but should never go below 50°. It is a native of Guatemala, whence it was introduced in 1835.

Lælia pumila.—When seen in good condition this is a charming species, but it is not everywhere well grown. It is a small growing plant with pseudo-bulbs about 3 inches in length, each of these bearing one leaf. The leaves are large considering the habit of the plant, being in good forms upwards of 4 inches across; the sepals and petals are light rosy purple, the lip deeper in colour, especially on the front, and in some varieties edged with white. Lælia pumila is best grown in baskets suspended from the roof at the cool end of the Cattleya house. A very thin layer of peat and Sphagnum will be sufficient for it, and the drainage must have special attention. It is of the utmost importance in growing L. pumila and the several nearly allied kinds that a nicely tempered atmosphere be always maintained. The supply of fresh air must be unstinted, yet the ventilators must be so managed that no cold draughts play upon the plants. Thus they are safe from sudden checks, and even if the plants do not make very large growths or increase much in size, it is something to have them healthy and flower regularly. The flowering season is just past, and the present is a good time to give a light top-dressing if necessary. L. pumila was introduced from Brazil in 1838.

Dendrobium album.—A well-flowered plant of this distinct old species is not often met with, and it is difficult to say why it is not more grown. It has very much the habit of D. chrysanthum, and, like that species, flowers upon the current year's growth occasionally while the leaves are still green. The individual flowers are clouded white with a yellow disc to the lip. D. album requires the heat of the East India house all the year round, and may be grown on large cork blocks dressed with Sphagnum Moss, the long pendulous stems showing to great advantage in this way. The plants may also be grown in moderately large wood baskets, these being suspended from the roof. It spoils the effect of the plants to be staked or tied in any way, especially as is too often the case with pendulous kinds. It is a native of India, and was introduced in 1842.

CATASETUM BUNGEROTHI.

Few Orchids have attracted more attention than this remarkable and wonderful species, with its widely-differing male and female flowers. Although at one time it was very expensive, it can now be purchased at a comparatively cheap rate, and all who like curious flowers and take an interest in them should grow a few plants. Although the female flowers are seldom produced, the usual or typical ones are sufficiently interesting to merit attention. These are pale green when opening, afterwards becoming of the purest white. The spikes are produced from near the base of the fusiform, scaly pseudo-bulbs, and bear few or many flowers according to the strength of the plant. C. Bungerothi requires plenty of heat while making its growth, and as the roots are easily damaged by closeness of material, a little care in the preparation of the compost is well repaid. The former are rather large and of a fleshy nature, and consequently anything used about them should be rough and open. Three parts of clean, freshly-picked Sphagnum—the other part being made up of peat fibre and broken crocks—will make a suitable mixture. They may be grown either in pots or baskets. Personally, I prefer pots. The drainage must be kept free and open by protecting it with a layer of Moss. Small plants are difficult to start, but when once they obtain sufficient strength to push the roots freely but little trouble will be found with them. At the time the new shoots are starting from the base a good deal of care is necessary in watering, and even when growing freely no water must be allowed to drip into the centre of the growths, or it will assuredly mean their destruction. When the roots are well advanced plenty of water must be given, and the plants must not be shaded more than is necessary to prevent injury to the foliage. As soon as the pseudo-bulbs are complete the supply of water must be diminished by degrees until all the leaves have fallen, when only enough must be given to prevent the pseudo-bulbs shrivelling. The foliage is apt to be attacked by scale, and occasionally red spider, which must be kept under by the usual means. C. Bungerothi is a native of Ecuador, whence it was sent to Ghent by its discoverer, whose name it bears, about 1885.

R.

Miltonia spectabilis.—Introduced into this country many years ago, this Miltonia is still one of the most useful Orchids in cultivation. In the form of a large specimen bearing a dozen or two flower-spikes it is very showy, that is if a good variety of it is obtained, for the inferior ones are not worth house room now that there is such choice of good things among Orchids. The finest specimens of this Miltonia I ever saw were in large baskets, with nothing but Sphagnum and charcoal for the roots to work into. They were very showy when in flower, carrying a score or more good spikes of bloom. If pots are used they should be nearly filled with drainage, but I should certainly advise the employment of baskets and very little if any peat. A little shade is needful, but plenty of light, with a tolerably free admission of air in fine weather, is of great importance.—J. C. B.

THE GARDENS AT BURGHLEY, STAMFORD.

The High Park Gardens at Burghley are at all times interesting, but now they are particularly so, and the walk from the quaint old stone-built town of Stamford, past the magnificent mansion and through the park with its stately avenues is itself an experience worth going miles to enjoy. These avenues are threefold in plan, like the nave and side aisles of a cathedral. "Burghley House by Stamford town" was built by Elizabeth's great Chancellor or Treasurer in 1575, his principal residence then being at Theobalds, in Hertfordshire. Even Cromwell was struck by the magnificence of Burghley, and spared the place; and Queen Elizabeth, who came here twelve times, is reported to have said that "Burghley was fit for a king"—a far nobler sentiment than that of William III., who thought it too magnificent for a subject to possess and enjoy. The grounds here were much improved by Capability Brown, the gently swelling mound near the house and the river-like winding of the lake being very suggestive of his method. Turn where you will at Burghley you feel within precincts that are regal, but it is with the great kitchen gardens at High Park that we are most interested to-day. Mr. Richard Gilbert has long held the management here, and some of his best cultural results are well known to readers of The Garden. It is worth one's while to go to Burghley in order to see how luxuriantly all fruit trees and vegetables thrive, this being specially true of Strawberries, Cucumbers, and Tomatoes of the very best kinds. The splendid Strawberry runners now being turned out of small pots and sent all over Europe are wonderful in health and strength, the balls a mass of white rootlets. Cucumbers are largely grown for seed, and the vineries and Peach houses are in the best order and the fruit splendid in size and colour. It must not be imagined that stimulants of the best are not used, for Mr. Gilbert is a cultivator of the good old school, and he full well knows that "out of nothing, nothing comes." Flavour is looked upon as of the utmost importance, even though size and

density of cluster in the case of Grapes are also a result looked for and obtained. Mr. Gilbert's Grapes are worth seeing even in these Grape-growing times. The bunches are solid and do not fall all over the dish when they are placed on the table. The berries are as plump and as blue as Sloes. Peaches indoors are of course over, but I saw fine ripe fruit here and there on the walls. Morello Cherries I never saw so large, so black, and so perfectly ripened before.

Apples are a speciality here, and Mr. Gilbert thinks highly of Laxton's Schoolmaster, which, as he puts it, "will keep Laxton's name green for half a century to come." The Stamford Apple, now known as Peasgood's Nonsuch, is also well grown here, together with all the standard varieties, Lord Suffield, Warner's King, Burghley Seedling, November Belle, and Grenadier. Barnack Beauty is another fine Apple of local excellence. Frogmore Prolific and Golden Noble are very fertile, and Lane's Prince Albert is to be fairly tried, though it does not appear to do so well in the midland clay as near London on light gravelly soils. A tree of the pretty little French cook's Apple, now known as Knight's Late or Lord Exeter, is bearing a heavy crop, and is especially interesting as having been brought here from the Continent many years ago. There is an Apple orchard here of about 7 acres, containing 400 trees of kinds best suited to the soil and climate. The kitchen garden at Burghley is about 14 acres in extent, protected by surrounding and cross walls, thus affording shelter and warmth for both wall trees and the other garden crops.

One of the features of Burghley must not be forgotten, viz., a fine healthy Walnut tree in the little enclosure near the gardener's lodge, which just now is literally laden with fruit. This tree was planted by the late Marquis of Exeter about forty years ago, and is now very highly prized as a memorial of his great interest in horticultural pursuits. Here also may be seen one of the oldest and best of all the golden Roses, and one long prized in old-fashioned gardens. All the old authors mention it, and the worthy Dean of Rochester alludes to its superb beauty, while regretting that it would not thrive with him. It is the old Rosa sulphurea (=R. hemispherica), or golden Cabbage Rose, one tradition of which is that it was brought from the East by the Knights Templar when returning from the holy wars in mediæval times. Come from whence it may, it is figured in the *Botanical Register*, t. 46, but that coloured illustration gives but a faint idea of its superb beauty as seen in perfection in the Burghley gardens. F. W. Burbidge.

Stove and Greenhouse.

TUBEROSES.

Regarded from an all-round point of view, the Tuberose is valuable alike to the private gardener and the market grower. The exceeding purity of the flowers and their pleasing fragrance are among the most valued points, though by no means least in point of general usefulness is the way that every flower as it expands may be used. This to the florist is, of course, of extreme importance, and equally so to the private gardener who daily has to furnish buttonhole flowers, and also daily provide fresh supplies of pleasing or fragrant blooms for the dinner-table or other purpose. In either of these instances a long succession of such flowers is of greater importance than a large display at any given season. The former is also the more trying to the gardener who has to produce daily supplies of such things. But whoever he may be, he will find very few plants of greater service than the double Tuberose known as the Pearl. Happily, the Tuberoses lend themselves readily to varying cultural methods, such as are calculated to prolong their season of bloom considerably; so much so, indeed, that they may be had in flower for the greater part of the year. It is a comparatively easy matter for those who have some knowledge of the subject to select tubers that will soon start into growth, or, more correctly, will soon produce their spikes of flowers. Judging by the percentage of these, it is by no means improbable that it is an earlier flowering variety naturally, and that a selection of them in their American home may prove of some commercial worth. But, taking the ordinary run of tubers, the simplest way to obtain the earliest flowers is to pot them into 3-inch pots as soon as received, and plunge on a bottom heat of about 75°. Give one thorough watering at the start and then spray occasionally with the syringe, using tepid water. Where darkened frames are obtainable, cover the tubers with them. In other cases a few may be potted and plunged in boxes of fibre and placed over the hot-water pipes, taking care at all times to attend to watering. Three-inch pots are always best for earliest work and frequently conduce to the spikes pushing early. Some will be sure to push spikes without producing foliage, and all such may be pushed forward on the bottom heat till the earliest flowers begin to open.

A second early batch may be made of those that produce foliage in the ordinary way, giving all such a shift into 5-inch pots when the smaller ones are fairly filled with roots. It will also be prudent that the soil be of much the same temperature as the house, and that the plants shall have been removed from the bottom heat bed a few days prior to the work being done. This batch will generally carry a supply of flowers to midsummer. From this date and throughout July and August prices range so low for Tuberoses, that many florists endeavour to be without them during these months, or at least to provide a limited supply only. Throughout the autumn and onward to Christmas Tuberoses are much esteemed. When required for late work they must be kept in a frost-proof shed or cellar till the end of May or middle of June. Then pot them into small pots in fairly good sandy loam with manure added and place in the open, covering them completely with coal ashes or fibre. One thorough watering should be given before covering them up, and afterwards only occasionally till growth is apparent. In many places these late ones are the most important batch. As the plants are ready they should be shifted into 5-inch pots and grown on in frames, or at first only shelters. The use of a richer soil is advised with these so as to promote a good leaf growth before being housed. Frequent watering overhead and occasionally with clear soot water will prove helpful. With the advent of cooler nights in October or even earlier, the sashes must be put on, and early in the afternoon at closing time moisten the plants overhead. All late Tuberoses when housed very quickly become infested with red spider or thrips.



Tuberoses. From a photograph sent by Mrs. H. Knight, Grange Road, Lewes.

To keep all such in check as much as possible I have found it a capital plan while the plants are still in frames outside to water overhead twice weekly with liquid manure. Do this late in the afternoon and close the frames at once. The foliage will feed on the manurial fumes present, and all the usual pests will be few and far between. From these frames or pits the plants may be housed as required and as the flowers approach the opening stage. Care should be taken not to house these late ones much before the stage suggested, remembering that throughout the treatment has been one of retarding, and the plants quickly respond to heat when placed in it. The exceptional heat of the past September has surpassed all previous experience, the plants coming forward by leaps and bounds. Should red spider put in an appearance, a solution of soft soap and quassia will prove helpful. Take two tablespoonfuls of the former and a 5-inch pot of the quassia chips and boil for twenty minutes, using rain water. When cooled down this will make sufficient for three gallons. This may be used freely till the

flower-spikes are fully grown when it must be discontinued. E. J.

Ivy-leaved Geraniums. — These beautiful plants have lately been conspicuous in the flower garden by reason of their blooming more freely late in the season than during midsummer, when the ordinary zonals are aglow with colour. There are now so many beautiful Ivy-leaved varieties, that it is well-nigh impossible to particularise the best, but I do not think any of the newest ones can surpass the old well-tried Mme. Crousse and Souvenir de C. Turner, the flowers of the former being of such a soft pleasing colour, that they harmonise well with a great variety of combinations when used in mixed beds, while the latter has such a sturdy bold flower, that it is one of the best for outdoor decoration. For hanging baskets few plants can equal these two varieties. If cut flowers are in request, I do not think anything is so useful to the gardener as the back wall of a greenhouse covered with a mixture of Ivy-leaved Geraniums, for having good long flower-stalks and forming such large trusses of bloom they are just the thing for bouquets or filling vases. I find they flower more freely when planted in boxes or pots with only a limited root-run than when grown in deep rich borders. It is surprising what a large specimen may be grown and kept healthy for years in a pot under a foot in diameter if a little artificial manure is given with the water during summer.—J. G., *Gosport.*

Shrubby Veronicas.—These are just now very bright and cheerful, not only in the favoured spots along our southern and western coasts, where they are hardy and form large bushes, but even where they have to be treated rather as greenhouse plants. As such they are very useful, and during the autumn and early winter, when little else but Chrysanthemums is to be met with, a few neat bushes of Veronicas afford a pleasing variety. The fact that they will keep in health and continue to bloom in a structure that is just kept free of frost is another great point in their favour, for neither the blossoms nor leaves are liable to damp during the dull days of winter. In speaking of these Veronicas as hardy, exception must be made in the case of winters such as the last, for they perished in places where they had stood for years. Some of the varieties are very popular with those growers who supply the London costermongers with plants, for at some periods of the year immense numbers are disposed of in the streets of London in the autumn.—H. P.

Chrysanthemum frutescens Aurora.—This is very useful where a continuous supply of flowers has to be maintained. It is of a dwarf, freely branched habit of growth, so that profusely-flowered specimens may be had when very little more than a foot high. The flowers are double and of a clear bright yellow colour. It will continue to bloom for months together; in fact, so free-blooming is it, that when young plants are required to grow on as quickly as possible, the flower-buds must be continually pinched off. Grandly grown little specimens of this Chrysanthemum may be met with in Covent Garden Market at the present time, and they seem to meet with a ready sale.—H. P.

Abutilon Sanglant.—This is one of the best of the bright red-coloured varieties of Abutilon, and in making a selection it should be included. It is of good free growth, but with occasional stopping will form a neat bushy plant in a small state more readily than some of the others. Boule de Neige still continues to be the best white variety, and of the numerous yellows I like Golden Fleece. The double-flowered form of A. Thompsoni, which attracted a good deal of attention a few years ago, does not as a rule bloom so freely as the others, hence it is not very popular. One striking feature connected with Abutilons is the fact that there are so many varieties with variegated leaves, several of which are used for bedding out during the summer. One of the newest of these variegated Abutilons is Souvenir de Bonn, which received an award of merit from the Royal Horticultural Society about a couple of years ago. It is a free growing variety with deeply lobed leaves, which are broadly, but irregularly edged with creamy white. The flowers of this are yellow, deeply veined with red. Another variety, nævium marmoratum, has the leaves marbled with pale green and yellow, while much the same description will apply to that well-known form, Thompsoni, which is so much used for bedding. The yellow-flowered Eclipse has its leaves spotted with golden yellow, while there is a very distinctly marked variety of the old brick-red coloured A. Darwini, known as tessellatum, in which the comparatively large leaves are marked with different shades of pale green and yellow, arranged in a peculiarly tessellated manner. This is not nearly so often seen as it was a few years ago. Of the little rambling A. vexillarium or megapotamicum, there is a variegated-leaved variety, but when growing freely it is very apt to revert to the green form. An Abutilon that requires the temperature of a stove, or at least of an intermediate house, is A. Sellowianum marmoratum. The leaves of this are very large and variegated in an almost indescribable manner with different shades of green and yellow. It is a very striking plant when well grown.—H. P.

CONTINUOUS-FLOWERING GESNERADS.

As a class, the different Gesnerads occupy a prominent position among flowering plants, for in most instances their blossoms are very beautiful, while in many the foliage is also decidedly ornamental. In several cases, too, their value as flowering plants is still further enhanced by the length of time over which the season of blooming extends, for some kinds may be had in flower throughout the greater part of the year. This latter feature is well exemplified in the numerous forms of Streptocarpus that are now so popular—a position they acquired by rapid bounds. Their popularity is certainly well deserved. Much the same remarks will apply to a newer introduction—Saintpaulia ionantha, whose pretty violet-blue flowers, lit up with yellow anthers in the centre, are borne in the greatest profusion. It is also easily grown and quickly makes headway when raised from seed, as was well shown at a recent meeting of the National Chrysanthemum Society at the Aquarium, when a small group of well-bloomed plants was shown. The plants then shown had been raised from seed sown in January. When numbers of this Saintpaulia are raised from seed there is a certain amount of difference to be detected among some of them in the colour of the leaves, as well as the blossoms. Up to the present there have been no very marked floral differences, but as there is a tendency to vary when raised from seed, it is probable there will be some more distinct forms before long. Should any individual show such a wide divergence from the normal form that it is desired to increase this particular plant, it can be readily done by means of leaves, exactly as in the case of Gloxinias, except that with these last, tubers are produced while the Saintpaulia only pushes out a mass of fibres, but a rosette of leaves quickly makes its appearance. In proof of this I may mention that I have some neat little flowering plants, the product of leaves put in early in the spring. The leaves were cut from the parent plant, leaving as much stalk as possible, and they were then dibbled into cutting pans of sandy soil at such a depth that the base of the blade of the leaf was level with the soil, the whole of the stem being thus buried. They quickly rooted and formed young plants that were at once potted off and shifted on as required. The resemblance between this Saintpaulia and the hardy Ramondia pyrenaica is very noticeable, and perhaps in time we may obtain a white Saintpaulia, as in the case of the Ramondia. Seed of this should be sown early in the year, and the treatment usually given to Gloxinias will suit it well. The Gloxinias are not so continuous blooming as some other Gesnerads, that is to say, they generally yield a great wealth of bloom and then quickly decline, but still if grown in a successional manner their flowers may be had for a lengthened period. Very pretty and quaintly marked blossoms are borne by some of the Tydæas, and in many cases the stems will lengthen and flower continuously. I have seen the same individuals in good condition from midsummer till winter put in an appearance. The genus Tydæa is now-a-days not recognised by some of our authorities, one of the names substituted for it being that of Isoloma, and with regard to this a plant that has always borne this last mentioned generic name—Isoloma hirsuta, will bloom continuously. It is a good deal like the varieties of Tydæa, except that the mouth of the flower is rather more contracted than in the case of many of them. The colour of the flower is bright vermilion, while a singular feature is furnished by the entire plant—flowers, leaves, and stems being thickly clothed with brownish hairs. Cyrtodeira fulgida, also known as Episcia fulgida, a creeping growing stove plant, will often produce its rich glowing scarlet blossoms for six months of the year. T.

BEGONIA DISEASE.

I had hoped to see in The Garden an answer to Mr. J. C. Tallack and Mr. E. Burrell giving a remedy for the Begonia disease. My plants had the disease slightly in 1892 and very badly in 1893. In April, 1894, I had about one thousand seedlings pricked out into pans and placed on a shelf near the glass in a Cucumber house. The disease began to eat them away in patches, and in some of the pans I lost them all. The leaves on some pot plants in the same house began to curl and to get into a state of stagnation in the same way as mentioned by Mr. Tallack. They were put into a warm house to push on the growth, and I came to the conclusion that it was the heat and steam from the hot-water pipes that started the disease. I could not water them without the water running down on the pipes. I then put them into cooler quarters, but I did not get rid of the disease all the year. I dipped some of the plants into a mixture of petroleum, soft soap and sulphur, which certainly seemed to check the disease. This year I started them on quite a different plan. Early in April the tubers for bedding were planted thickly in a warm south border; they did not come up very regularly, but all the best plants were taken up and planted in the beds the first week in June. They did very well indeed, and no disease. Those for pots I placed in a cold frame, and as soon as they were nice plants I put them into a cool, well-shaded greenhouse. They did not grow so large as in other years, but there has been no disease amongst them. Next year I intend to put the tubers in boxes without soil, and place in a warm house just to give them a start, and then plant out and pot them in the same way as this year.—G. C.

*** With regard to growing the tubers for summer bedding we have found that by far the best way is to start them in a cold frame on which has been placed a layer of cocoa-nut fibre, covering the tubers right over with the same material. If this is done at the latter end of March or the beginning of April the tubers will have started strongly into growth, and with a wig of roots may be transplanted to their permanent quarters in the flower garden about the end of May or beginning of June. Treated thus and kept well watered both at the roots and overhead during the summer, the soil in which they are grown being light and porous, we have found no difficulty with them.—Ed.

—— The so-called Begonia disease is, I fear, rapidly increasing. It not only attacks Begonias, but Gloxinias, Fuchsias, Achimenes, and many things besides. Some of my Chrysanthemums have this summer been troubled with the same disease. Others as well as myself are under the impression that it is an insect almost invisible to the naked eye. Whatever it may be, it is very troublesome. I find flowers of sulphur very beneficial. Plants that have looked stunted and rusty

have, after an application of the above, greatly improved, making a new growth in a short time. —R. N.

*** The disease attacking your plants certainly points, as we have said before, to its being thrips. —Ed.

—— I think the editorial note on page 264 which assigns the supposed Begonia disease to the attacks of thrips is correct, for I have seen considerable damage caused in this way, more frequently among the fine-foliaged Begonias than among the tuberous section, though these latter are by no means proof against the attacks of such pests. It is not the large black thrips which can be plainly seen that are the cause of this damage, but very small insects of a yellowish colour, which are so minute, that a considerable amount of damage may be done before their presence is suspected. They first of all attack the younger leaves, causing them to become swollen and diseased looking, when after a time they drop. Once a plant gets into this state it is very difficult to start it into healthy growth again. The flowering class of fibrous-rooted Begonias is also particularly liable to be attacked by these thrips if the atmosphere be rather too dry and warm. Begonias are by no means the only class of plants with which these pests play havoc, many others suffering more or less from their attacks. Thus, the showy flowered Impatiens Hawkeri has in some places been discarded owing to the fact that it is almost impossible to get a good specimen, and so minute are the insects, added to which the mischief is usually done while the leaves are so young, that the true cause is seldom suspected. The remedy is to maintain where possible a moister atmosphere, and fumigation or some other method of destroying insect pests must also be resorted to. If the plants are dipped occasionally in any of the numerous insecticides (a strong solution of soft soap is as good as anything), they will be kept clear, but the best method of destruction is nicotine in the form of vapour. Gloxinias in a rather warm, dry atmosphere are liable to be attacked in the same way.—H. P.

—— Mr. Tallack (p. 247) and Mr. Burrell (p. 275) spoke of this, and both seem to be at a loss to know how to deal with the plants affected. It is no disease at all, the black marks which begin on the stems of the plants and gradually increase till they reach the points of the shoots being caused by thrips. It is easy to find them with a small magnifying glass. The plants must be kept in a moist atmosphere during the early part of the season, lightly syringing once a day in bright weather being very beneficial. This should be continued till the flowers are opening. If the plants are kept free of the thrips till then, I do not think they will be attacked afterwards.—C. F. Langdon.

Hybrid Streptocarpi.—Messrs. Veitch, of Chelsea, have now (as noted in a recent issue) a most interesting collection of these useful plants. When I visited the nursery a week or two back—rather late in the season to see these plants at their best—I found that a great advance in the matter of colour had been made. Self-coloured flowers in pink, rose, red and purple of varying shades were there in plenty, together with delicately-marked flowers, in which one or other of these colours was to be found on a white ground. Pure white forms were there, too, but not so plentiful as the coloured forms. A good strain of unstained white flowers will be useful for special purposes, but for me they have not the charm which coloured flowers have, as even the faintest of lines along the tube seems to enhance and accentuate the beauty of form which the flowers possess. As the plants set apart for seed-bearing were arranged in blocks of one colour or shade, it is possible that we may be able in future to get seeds of each colour separately, and this will be a considerable help to the grower.—J. C. Tallack.

Asparagus Sprengeri.—I consider this one of the most distinct of all the indoor species, and as a contrast in form, habit and colour to A. plumosus, A. decumbens, &c., it well merits the attention of all interested in greenery for bouquets, wreaths and sprays. But it is most handsome as seen drooping gracefully and naturally from pot or hanging basket in a warm plant house or conservatory. I originally obtained the plant some years ago from Messrs. Dammann and Co., of Naples, and it has been much admired by visitors, none of whom ever saw it before. It is an evergreen species with silvery tubers, reminding one of those of some kinds of Oxalis, and its growths are thrown up in a free and plumose manner "like Prince of Wales feathers," as a lady said the other day. These feathery growths vary from 2 feet to 8 feet or 10 feet in length, and, being of a fresh light or Apple green hue, are admirably adapted for all delicate decorations indoors. I have had cut fronds in water that were quite fresh six weeks after they were cut from the plants. Like all the species, this will grow in almost any soil, but in large pots or baskets of rich compost with a handful of bone-dust the plumes are very long and beautiful. Another way is to plant out the crowns along the margins of the stages and allow the growths to fall over naturally like a green curtain or a cascade. My plants are in pots on a shelf and hang down over the head of a doorway, and they form an admirably fresh green background for a few Cattleyas or Dendrobes in flower. The wonder is that such a distinct plant has not long ago found its way into Covent Garden Market by the hundred, seeing that it grows so freely and endures fresh and fair all the year round. In Italy it can be grown in the open ground all the warmer part of the year, and as it is offered cheaply and in quantity, it should, as it deserves, soon become known to our market growers of select decorative materials.—F. W. Burbidge.

Burbidgea nitida.—Many of the Gingerworts are noteworthy by reason of their attractive blossoms, and this is one of them, for the flowers are not only showy, but, being borne at this season of the year, are doubly welcome. It is a far less vigorous-growing subject than the Alpinias, Hedychiums, and some other allies, for the Burbidgea, as a rule, only reaches a height of about 18 inches. The stems are slender, clothed with bright green glossy leaves, while the flowers, which are borne in a terminal panicle, have some of their parts considerably reduced, the principal ornamental portion consisting of three segments which are of a bright orange colour that deepens with age, the exterior of the bloom, too, being always darker than the inside. The roots do not penetrate to any great depth, hence in cultivating it in this country pans are to be preferred to pots. Good drainage, too, is essential. This Burbidgea is a native of shady forests in North-West Borneo at an altitude of 1000 feet to 1500 feet, in spots where there is little undergrowth. In a wild state it thrives best where the rhizomes form matted masses on moist rocks



Astilbe japonica. (*See p.* 355.)

covered with vegetable débris, and it then frequently produces from ten to thirty slender flowering stems, each bearing a panicle of twelve to twenty flowers. This plant is named after Mr. Burbidge, who discovered it in 1878 when travelling for Messrs. Veitch. In addition to its other features, Mr. Burbidge remarks the pleasing fragrance emitted by the rhizomes when they are disturbed in any way.—H. P.

Societies and Exhibitions.

CRYSTAL PALACE CHRYSANTHEMUM SHOW.

November 2.

This show, held on Saturday last, was well attended, and brisk competition was manifest in all classes. Every type of the flower was admirably represented in the cut flower sections of the show, but the growth of specimen plants seems to have lost its charm even with the limited few who used to exhibit them. There was only one really creditable lot of trained plants in the show; these were standards, but an excellent lot, abundantly flowered, and not at all stiff.

The chief class here is that for thirty-six Japanese blooms in not less than twenty-four varieties. We doubt if a finer stand will appear at any London show than that which won the first prize. It was shown by Mr. W. H. Lees, gardener to Mr. F. A. Bevan, Trent Park, Barnet. The flowers throughout were even in size, and fresh. The best blooms were those of Mrs. W. H. Lees white; Phœbus, yellow; Mme. Carnot, white; Mutual Friend, white; G. W. Childs, deep crimson; H. L. Sunderbruch, yellow; Mme. G. Biron, chestnut-red; Mme. A. Moulin, white; Sunflower, yellow; Chas. Davis, buff; Mlle. Thérèse Rey, cream-white; Reine d'Angleterre, rose; Miss Dorothy Shea, bright chestnut-red; Mons. C. Molin, bronze-yellow, deeply coloured; M. Pankoucke, yellow; and International, a large flower, but flushed with lilac, and by no means so beautiful as the great flourish that was made on its first appearance would lead one to suppose. The second place fell to Mr. J. W. McHattie, gardener to the Duke of Wellington, Strathfieldsaye, who had many good blooms. He was ran closely by Mr. C. J. Salter, gardener to Mr. T. B. Haywood, Reigate. For eighteen distinct Japanese there were nineteen entries, and few points divided the winning stands. The first prize fell to Mr. C. Cox, gardener to Mr. J. Trotter, Brickenden Grange, Hertford. The best blooms were Eda Prass, W. Seward, Mrs. Falconer Jameson, Viscountess Hambledon, T. Wilkins, Col. W. B. Smith, Commandant Blusset, M. Pankoucke and E. Molyneux. Mr. W. Collins, gardener to Mr. J. W. Carlisle, Ponsbourne Park, Hertford, was a very good second. The third lot in such a well-filled class would naturally be good, and Mr. A. Jones (gardener to Miss Wyburn, Hadley Manor, Barnet) filled that position with a very good stand of flowers. The best twelve Japanese were shown by Mr. G. Smith, gardener to Mr. R. W. Inglis, Craigendowie, Reigate Hill, Mr. H. Butcher being second. There were eleven entries in this class, with close competition throughout. For six Japanese one variety, out of sixteen exhibits, Mr. W. Robinson (gardener to Lord Justice Lopes, Westbury, Wilts) was first with very fine deeply-coloured flowers of Viviand Morel. Mr. Charles Cox was second with Col. W. B. Smith; these also a handsome and much-admired lot. The reflexed and Japanese reflexed class seems to have led to some confusion, as all the exhibitors were disqualified; but three extra prizes were awarded to Mr. W. Robinson, Mr. R. C. Notcutt, Ipswich, and Mr. C. J. Salter.

The best twenty-four incurved blooms were also shown by Mr. W. H. Lees, and here again evenness and perfect finish characterised every flower in the stand, Empress of India, white; Globe d'Or, buff-yellow; Jeanned'Arc, white, flushed with lilac; Lord Alcester, cream; Baron Hirsch, deep buff; Charles H. Curtis, rich yellow, two fine well finished blooms being shown; Miss Haggas, pale yellow; Golden Empress and Violet Tomlin being all first-rate flowers. The second lot came from Mr. J. Dumble, gardener to Sir Charles Phillips, Picton Castle, Haverfordwest, but there was a marked falling off in depth and finish as compared with the first stand. For eighteen incurved distinct varieties the first prize went to Mr. T. Robinson, gardener to Mr. W. Lawrence, Elsfield House, Hollingbourne, Kent. His best blooms were those of Mme. Darrier, D. B. Crane, John Lambert, Miss Haggas, Mrs. S. Coleman, Lucy Kendal and Queen of England. The second prize went to Mr. J. Wyatt, gardener to Mr. J. Perry, Bradenhurst, Caterham Valley. Mr. H. Butcher, gardener to Mr. C. Buss, Smeeth Ashford, Kent, was first for twelve incurved blooms with a good, fresh, well-finished lot, M. P. Martignac, rich yellow, being a telling flower in this exhibit. The second lot was shown by Mr. A. Sturt, gardener to Mr. W. L. Cohen, Round Oak, Englefield Green. The class for six blooms of any incurved variety brought out a strong competition, fifteen exhibits appearing. Mr. H. Butcher was awarded first with grand deeply-coloured blooms of the rich bronze variety Baron Hirsch. Mr. J. Wyatt was second with the same variety, which was shown by seven exhibitors in this class.

In the Anemone-flowered class for eighteen distinct varieties, Mr. H. Prickett, gardener to Mr. John Harvey, East Barnet, was first, showing good flowers of W. W. Astor, John Bunyan, Dame Blanche, Sir W. Raleigh, Lady Margaret, and Judge Benedict. The second prize went to Mr. J. Milner, gardener to Mrs. Higgs, Willenhall Park, Barnet. There was good competition here with nine exhibits. The best twelve Anemone-flowered Japanese came from Mr. J. Milner, the second prize falling to Mr. H. Prickett. For twelve singles, distinct varieties, three blooms of each, Mr. W. Wells, Redhill, was first, and Mr. W. C. Pagram, gardener to Mr. J. Courtenay, Weybridge, second. As regards the pompons, there is a growing tendency to force these to an inordinate size, and the judges wisely passed over one lot of great blooms not at all like what pompons should be, giving the first award to Mr. C. J. Salter, who showed a pretty lot of bright fresh flowers. Mr. H. Harris, gardener to Mrs. Eversfield, Denne Park, Horsham, was second. Messrs. Salter and Harris were similarly placed in the class for twelve Anemone pompons.

The best group arranged in a space of not less than 100 square feet, and of Japanese varieties only, was shown by Mr. W. Wells, who departed somewhat from the conventional style of arrangement, with an improved result. Mr. W. E. Tidy, Brockhampton, Havant, was second, with well-flowered, but stiffly-arranged plants. A class for a group occupying half the above-mentioned space, open to amateurs only, was not well filled, Mr. W. Webster, gardener to Mr. W. Higgs, Binfield Road, Clapham, receiving first with the only group shown. For the best group of Japanese kinds arranged for effect with Crotons or any other fine-foliaged plants, Mr. W. Howe, Park House, Streatham, was first, with a pretty arrangement, that might have been made even more effective but for the rather absurd limitation to an oval space only 14 feet long and 10 feet broad. The second prize went to Mr. T. Wilks, gardener to Mr. M. C. Ralph, Cranbrook Villa, Upper Norwood. Mr. G. H. Cooper, Sydenham Road, Croydon, showed a good lot of standard-trained plants. The single specimen plants, too, were good, Mr. W. Leakey (gardener to Mr. J. M. Douglas, College Road, Upper Norwood) being first, and Mr. G. H. Cooper second, both showing freely-flowered plants of the variety W. H. Lincoln. For an arrangement of cut Chrysanthemums with Crotons, Ferns or autumn-tinted leaves, Mr. W. D. Aspland, florist, Crystal Palace, was first with a large and graceful exhibit.

The miscellaneous exhibits were not numerous on this occasion, but comprised a group of Chrysanthemums from Mr. T. S. Ware, Tottenham; a graceful arrangement of Chrysanthemums and other flowers in bouquets, wreaths, baskets and other designs from Miss M. Jackson, Upper Norwood; and pompon and single Chrysanthemums from Mr. W. Wells. Mr. Briscoe-Ironside showed some of his new varieties and his revolving flower-stands, designed to supersede the show-board. Messrs. J. Laing and Sons arranged a pretty group of fine-foliaged plants and Vine leaves. Grapes and Tomatoes were shown by Messrs. W. and D. Buchanan, Forth Vineyard, Stirling.

A full prize-list is given in our advertisement columns.

NATIONAL CHRYSANTHEMUM SOCIETY.

November 5, 6, 7.

The chief show of the present season held under the auspices of this society opened at the Royal Aquarium, Westminster, on Tuesday, and it was generally acknowledged to be one of the finest shows that has ever been held, not only in the matter of competition, but also in the high quality of the flowers that was manifest throughout. The Japanese type of flower was paramount throughout the show, and the most recent additions to this class were generally shown to such an extent, that varieties which occupied leading places less than a decade ago are now scarcely seen. Whilst we cannot speak of the exhibition but in terms of the highest praise, we cannot help thinking that the arrangements might be greatly simplified and improved. In several cases it was only by chance that we found the winning stands in some of the smaller classes. If the numbering of the schedule cannot be consecutively followed throughout, surely it is possible to put the leading classes in something like sequence, instead of which we had to make a complete tour of the place. To cite an instance, we may mention class 12, in which there were only four entries, yet we found the first prize and another exhibit in one spot, and the second and third lots about 20 yards away. Such a system, or lack of system, tends to friction and unpleasantness that might be wholly avoided.

Cut Blooms.

These are always the chief feature of this exhibition, though never before has one exhibitor met with such extraordinary, but none the less well-deserved, success as Mr. W. H. Lees, gardener to Mr. F. A. Bevan, Trent Park, Barnet, who won the challenge trophy and both of the Holmes Memorial challenge cups. In the national competition of Chrysanthemum and Horticultural Societies, of which any number of members is allowed to contribute blooms, Mr. W. H. Lees, showing as a member of the Southgate and District Society, won the prize entirely with his own flowers, and a finer forty-eight were never seen. The Japanese kinds were Mme. Carnot, Charles Davis, Sunflower, Eva Knowles, Louise, Van den Hede, Mutual Friend, Mons. G. Biron, M. Pankoucke, Col. Smith, Mrs. Harman-Payne, Mme. Moulin, E. Molyneux, Phœbus, Mons. C. Molin, T. Wilkins, Viviand Morel, Mlle. A. de Galbert, Miss Dorothy Shea, H. L. Sunderbruch, Miss Rita Schrœter, Mrs. W. H. Lees, Charles Shrimpton and Mlle. Thérèse Rey. The incurved kinds were Empress of India, Minnie Davies, Lady Harding, Prince Alfred, Golden Empress, Hero of Stoke Newington, Lord Alcester, Louisa Kendal, Mrs. Shipman, Mons. Bahuant, C. H. Curtis, Mme. Mistral, J. Agate, Baron Hirsch, Mrs. Heal, Globe d'Or, Queen of England, Violet Tomlin, Robert Petfield, Mrs. Coleman, Brookleigh Gem, John Lambert, Lord Wolseley and Jeanne d'Arc. We have given the list of names, as doubtless it will be of general interest, and it is needless to individualise where all were so perfect. The second prize went to the Bromley and District Society, and in contrast to the success of the previous exhibitor, the flowers in this lot were contributed by nine growers. The Brighton and Sussex Society was placed third. There were five lots shown in this class. For forty-eight Japanese blooms, distinct—the first prize, one of the Holmes Memorial cups and £10—Mr. Lees

was again an easy first, with a superb lot of flowers. Mr. W. Mease, gardener to Mr. A. Tate, Downside, Leatherhead, was second, and Mr. W. Wells, Redhill, third. The eight lots in this class made a brave display. Another Holmes Memorial cup and £10 are given for the best thirty-six incurved blooms, and here again Mr. W. H. Lees was invincible, being an easy first. In a stand of great evenness throughout, special mention must be made of J. Agate, Globe d'Or, R. Petfield, Mrs. Coleman, C. H. Curtis, Mme. Darrier, C. Gibson, M. P. Martignac, Louisa Kendal and Jeanne d'Arc. Mr. W. Mease was second with a very nice lot. For some non-apparent reason the next class for twenty-four incurved was placed upstairs opposite classes 25 and 6. The first place was given to Mr. B. Calvert, gardener to Col. Archer Houblon, Hollingbourne Place, Bishop's Stortford, his best flowers being those of A. Salter, Lord Wolseley, Refulgence, Violet Tomlin, Miss Haggas and Lord Rosebery; Mr. J. Robinson, gardener to Mr. W. Lawrence, Elstead House, Hollingbourne, being second. The best twelve incurved blooms were shown by Mr. Walker, Goldbeaters, Mill Hill; Mr. R. Ridge, gardener to Mr. C. Swinfin-Eady, Oatlands Lodge, Weybridge, being second. Of six incurved blooms, one variety, ten lots were shown, half of them again being Baron Hirsch, but Mr. J. H. Walker won with six perfectly finished flowers of Jeanne d'Arc. Mr. B. Calvert was second with fine flowers of Alfred Salter.

Mr. H. J. Jones, of Lewisham, offered a cup of the value of five guineas in addition to the society's first prize for twenty-four Japanese blooms, distinct. This class brought out twenty competitors, and the whole lot was a show in itself. Mr. W. Messenger, gardener to Mr. C. H. Berners, Woolverstone Park, Ipswich, was first, showing grand flowers of Mrs. C. Harman-Payne, Col. Smith, W. Marshall, Violet Rose, Waban, Lord Brooke, and Mrs. G. J. Beer in his stand. The second prize went to Mr. G. W. Drake, Cathays Terrace, Cardiff, and the third to Mr. W. Allan, Gunton Park, Norwich. Mr. Jones offered a similar cup for twelve Japanese blooms, distinct, and there was about the same number of competitors in this class, Mr. J. Agate, Havant, winning first prize with a fine stand.

For the best six Japanese blooms of one white variety, Mr. R. Jones, gardener to Mr. C. A. Ryland, Barford Hill, Warwick, was first with superb flowers of Mlle. Thérèse Rey, Mr. J. Sandford second with Mlle. Marie Hoste. In a similar class for any colour except white, Mr. R. C. Notcutt, Ipswich, was first with blooms of Edith Tabor, a lovely flower with broad curled florets and of a soft clear yellow colour. Mr. B. Calvert was second with Col. Smith. For six incurved Japanese, distinct, we found that among four lots Mr. J. Agate, Havant, was awarded a third prize, and as these were excellent flowers, doubtless there were other exhibits in the class not discernible in the confused state that prevailed. An interesting class was that for six distinct Japanese varieties, exhibition blooms, three of each, one variety only in each vase and showing at least a foot of stem above the vase. Mr. D. M. Hayler, gardener to Mr. W. Hannaford, Tenterden Hall, Hendon, was first with very fine flowers, Duke of York particularly striking. Mr. C. H. Martin, gardener to Mr. R. H. Langton, Hendon, was second. For six blooms of hairy-petalled varieties, Mr. Wells was first, showing L. Bœhmer, White Plume, Hairy Wonder, Miss Higginbotham, Mrs. W. J. Godfrey, and another. Mr. H. Love, Melville Terrace, Isle of Wight, was second. Mr. R. C. Notcutt showed admirably in the class for twelve large-flowered reflexed blooms, those of Christine, Cloth of Gold, Golden Christine, King of Crimsons, and Cullingfordi being the finest in a nice fresh lot. Mr. J. H. Walker was second.

The best twenty-four Anemone-flowered kinds came from Mr. W. Skegge, gardener to Mr. A. Moseley, West Lodge, Barnet. These were a charming lot, the best being Gladys Spaulding, Cincinnati, John Bunyan, Nelson, W. W. Astor, M. Dupanloup, Descartes, Fleur de Marie, Queen Elizabeth, and Enterprise. The second prize went to Mr. A. Ives, gardener to Mr. E. C. Jukes, Hadlow Lodge, High Barnet. There were seven good lots in this class. In the two following classes for flowers of the same type, Mr. Skeggs was first. For twelve Anemone pompons, three blooms of each, Mr. C. Brown, gardener to Mr. R. Henty, Langley House, Abbots Langley, was first with a charming lot, especially the trebles of Francis Bryce, Mme. Monties, and Miss Nightingale. Mr. J. Myers, gardener to the Earl of Sandwich, Hinchinbrooke, Huntingdon, was a good second. For twelve pompons, excluding those of Anemone form, Mr. C. Brown was first, his best trios being Prince of Orange, Elise Dordan, Miss Bateman, Black Douglas, Mmo. Martha, W. Westlake, and Charles Dickens. Mr. T. Conyer was second. The twelve sprays of single-flowered kinds that won the first prize for Mr. J. Myers were the most charming lot we have ever seen, the varieties being Jane, white; Mary Anderson, blush; Purity, blush-white; Gold Star, yellow; Nora, deep rose; Foxhunter, chestnut-brown; Snow Wreath, white; Oceana, blush-pink; Admiral Symonds, yellow; Mrs. D. B. Crane, rose-pink; Bessie Conway, white, tipped with lilac; and Miss M. Wilde, deep rosy lilac, with lighter centre. Mr. W. C. Pagram, gardener to Mr. J. Courtenay, The Whin, Weybridge, was second, with another pretty lot.

The amateurs' classes were also well filled. For twenty-four Japanese, in eighteen varieties, Mr. J. Stredwick, Silverhill, St. Leonards, was first, and Mr. C. A. Jessop, Mildenhall, Suffolk, was second. Mr. J. Stredwick also secured first prize for twelve Japanese distinct varieties, the second prize going to Mr. H. Love. For twelve incurved blooms, Mr. W. Amies, Ashford, Kent, was placed first, the second award going to Mr. G. R. Crowne, Long Ditton. The best six incurved came from Mr. C. E. Wilkins, Swanley, the second lot coming from Mr. G. D. Willis, East Finchley. There were eighteen entries of six distinct Japanese, Mr. H. Love coming out successful, with Miss A. L. Gaunt, of South Tottenham, second. For a similar number of one variety, Mr. H. Love was again first with Sunflower, and Mr. J. Stredwick second with Viviand Morel, fine and deep in colour. Several classes are set apart for single-handed gardeners, and in these Mr. S. J. Cook (gardener to Mr. J. H. Hartridge, Hendon) was first for twelve incurved, Mr. W. C. Pagram showing the best six in the next class. Mr. W. Perrin, gardener to Mr. W. Richardson, Sawbridgeworth, was first with a good dozen Japanese, the second place going to Mr. Pagram. Metropolitan flowers are likewise encouraged, Mr. F. Bingham, Stoke Newington, being first in this division for twelve incurved blooms, very fair flowers being shown. For six of the same form, Mr. J. Brooks, gardener to Mr. Reynolds, Highgate, was first, and Mr. Bingham second. Mr. Brooks was likewise first with twelve distinct Japanese, the second prize going to Mr. W. Davies (gardener to Mr. W. F. Darnell, Devonshire House, Streatham Hill). Mr. W. Davies also showed the best distinct half dozen, followed by Mr. J. Brooks, and for the same number of one variety, Mr. W. Farrow (gardener to Mr. G. R. Peerless, Park Hill, Streatham) was first with good flowers of Charles Davis; Mr. W. Davies came second with Col. Smith.

Mr. Jones, of Lewisham, made a bold arrangement on a table 18 feet by 6 feet of cut exhibition blooms. The flowers were shown on long stems and intermingled with Crotons and Ferns; the first prize was well awarded here. The best three vases, each to contain twelve blooms arranged with any foliage, were shown by Mr. D. M. Hayter, Mr. J. Prewett, Hammersmith, winning in the next class for three epergnes. For two vases of the smaller-flowered kinds, Mr. M. Webster, Kelsey Park, Beckenham, was first, the same exhibitor being successful with two graceful hand bouquets. The best hand-basket, open only to ladies, was shown by Mrs. Newell, Victoria Road, Wimbledon. For a single vase of six blooms of one variety arranged with any foliage, Mr. A. Felgate, gardener to the Duchess of Wellington, Bunhill, was first, and in a similar class for amateurs, Mr. E. Jones, Malvern Road, Hornsey, was successful. The best hand-basket of autumn leaves and berries was shown by Mr. J. Mansey, Islington. The special prizes offered by Messrs. Williams, of Holloway, for six blooms of Philadelphia went to Mr. W. King, gardener to Mr. J. Colman, Gatton Park, Reigate, and Mr. W. Mease, whilst for three blooms, Mr. Norman Davis and Mr. T. Conyer were successful. In all fourteen lots of this new kind were shown.

Plants.

The usual number of classes was set apart for these, the groups being the centre of attraction. Mr. H. J. Jones had the finest group, a bold, yet graceful arrangement, in which he departed somewhat from the conventional sloping form, the finely flowered plants relieved with Bamboos, Palms, Crotons and Ferns. Mr. Norman Davis, Camberwell, was a very good second, his arrangement being a good and tasteful one. For six trained specimens and likewise for six standard-trained plants, Mr. D. Donald, gardener to Mr. J. G. Barclay, Leyton, was first with plants exceedingly formal in training, but freely flowered. The best six trained plants of pompons came from the same exhibitor, and were of the same high quality as regards quantity, perfection and freshness of bloom. Mr. Donald was the only exhibitor of a specimen plant, but this was a grand one, a huge pyramid of Margot, which must have had several hundred blooms, very uniform in size and colour and well distributed all over the plant. In two classes for four trained plants, Mr. W. Davey, gardener to Mr. C. C. Paine, Cedar House, Stamford Hill, was first with well-flowered plants.

Miscellaneous exhibits were also extensive and varied. Mr. T. S. Ware, of Tottenham, put up a large group of some of the finest Japanese kinds, and from the Jadoo Fibre Company came a good group, which showed conclusively that these flowers can be grown to perfection in this material. They were in 8-inch pots and carried fine flowers, notably the following varieties: Col. Smith, Mme. Carnot, Sunflower, G. S. Shrimpton, Viviand Morel and Charles Davis. From Messrs. J. Veitch and Sons, Chelsea, came a fine group of Chrysanthemums well arranged with Bamboos in relief. Mr. E. Tidy, Brockampton Nurseries, Havant, made a large display with cut Chrysanthemums arranged with Palms and Ferns in a free and pleasing way, Japanese, pompon and single varieties being prominent in many-flowered sprays. Messrs. H. Cannell and Sons, Swanley, showed cut Chrysanthemums in great numbers, their collection of Japanese varieties very comprehensive, Pride of Madford, Mons. Leon Dabat, James Myers, Australia, a new and large Japanese incurved of the E. Molyneux type, E. T. Ewing, A. H. Wood, G. W. Childs, A. Lancaster, and Philadephia being noteworthy. Mr. Norman Davis showed a few fine flowers of new Japanese kinds arranged above a groundwork of Ferns. Messrs. Williams, of Holloway, put up one of their characteristic groups, in which, besides tasteful arrangement, Cattleya labiata in variety, Heaths, Crotons, Solanums, Chrysanthemum Philadelphia, and Cyclamens were prominent features. Messrs. Cutbush showed a bright group of Palms, Grasses, winter-flowering plants. Cypripediums, Oncidiums, Odontoglossums, Heaths, Cyclamens, and Chrysanthemums. Mr. H. Shoesmith, Claremont Nursery, Woking, showed fine new Japanese kinds, notably Pallanza, rich yellow; W. Seward, Col. W. B. Smith, richly coloured; M. Gruyer, M. Charles Molin, Duchess of York, lovely flowers, full and graceful; Rose Wynne, very distinct; M. Pankoucke, grand blooms; W. Bolia, rich amaranth-red, silvery reverse, and very pretty; Deuil de Jules Ferry, deep crimson-amaranth, rosy reverse, and a grand new kind. Mr. W. J. Godfrey, Exmouth, exhibited Japanese varieties in quantity, the best being Mrs. J. B. Brice, a reflexed Japanese of graceful form and rich clear pink colour, a variety certain to become popular; Mrs. Hume Long,

long drooping florets, large, but not coarse, deep rose with silvery reverse; Miss Louise D. Black, very rich in colour; Mutual Friend, white; Reine d'Angleterre, Deuil de Jules Ferry, President Carnot, white intermingled florets, extra good; Mrs. W. J. Godfrey, incurved white; Clinton Chalfont, reflexed, rich yellow, likely to be one of the most popular decorative varieties. Mr. R. Owen, Maidenhead, showed two fine stands of new varieties, which included good blooms of Dorothy Gibson, yellow reflexed; R. Petfield and G. Haigh, incurved, the latter a distinct sport from the former. Good Japanese flowers were J. Bidencope, Pride of Maidenhead, cream-white, with yellow centre, a graceful flower; Eva Knowles, rich buff; Lady Ridgway, and several very fine unnamed seedlings.

Fruit and Vegetables.

The fruit staged was superior in many respects, the Apples and Pears specially fine. Vegetables were not up to the usual standard of excellence. For six dishes of dessert Apples there were ten lots. Mr. Geo. Goldsmith, Leonardslee, Horsham, was first with very highly-coloured fruits, having very choice Blenheim Orange, Cox's Orange, King of Pippins, Mother Apple, Adams' Pearmain, and rather uneven Ribstons, Mr. Turton, Reading, being a very close second, having grand fruits of Rosemary Russet, Jefferson, King and Cox's Orange Pippins. For cooking Apples, six dishes, the awards were reversed, Mr. Turton leading easily with splendid fruits of Emperor Alexander, Peasgood's Nonsuch, Cox's Pomona, Mère de Ménage, Prince Albert, and Bedfordshire Foundling. Mr. G. Goldsmith was a good second, his best dishes being Lord Derby, Warner's King, Gascoigne's Scarlet, and Peasgood's. For six dishes of dessert Pears, Mr. W. Allan, Gunton Park, Norwich, was an easy first out of ten lots staged, having very clear, large fruits, perfect in every way, Doyenné du Comice being specially fine, also Pitmaston, Durondeau, Emile d'Heyst, Marie Louise (a grand lot), and Marie Louise d'Uccle. Mr. Goldsmith was second, with equally fine Pitmaston, very fine Souvenir du Congrès, Beurré Diel, and General Todtleben. Grapes were not shown in large numbers. Mr. T. W. Hill, Rockshaw, Merstham, had the best three bunches of Gros Colman, the berries very fine and well coloured, Mr. W. Taylor, Tewkesbury Lodge, Forest Hill, being second, with larger bunches, but not well finished. For any other black Grape, Mr. Bury, Petersham Vineries, Byfleet, was an easy first out of four lots staged, having good shaped bunches, berries large and well coloured, the variety being Alicante. Mr. Taylor was second, with huge bunches, but lacking size of berry. For white Grapes, four lots were staged, Mr. W. Tidy, Stanmore, being an easy first with Muscat of Alexandria. For twelve varieties of Potatoes, Mr. Wiles, Farnborough, was first, showing very clean tubers, the varieties being Lord Tennyson, Mr. Bresee, Satisfaction, Reading Ruby, Purple Perfection, The Dean, Trumps and seedlings, Mr. E. Chopping, Sittingbourne, being second. The same exhibitors in the order named secured the awards in the six dishes, very fine Snowdrop and Windsor Castle being staged in the first lot. The collections of vegetables, nine kinds, usually strongly contested, only brought five competitors, Mr. Waite, Esher, being first, his Intermediate Carrots, Ailsa Craig Onions, Prizetaker Leeks and Brussels Sprouts being his best dishes; Mr. R. Lye, Newbury, a close second, having excellent dishes, but overdone with roots. Messrs. Sutton, Reading, received a gold medal for a magnificent collection of Potatoes, most of the varieties being similar to those staged last week at the meeting of the R.H.S. Messrs. Cutbush, Highgate, had a large collection of fruit, having fine Pears of the well-known kinds with some of the newer ones, in excellent condition, such as Le Lectier, Princess and Margaret Marillat (silver-gilt medal). Messrs. Lee and Sons, Ealing, had a collection of 100 varieties of Apples and Pears, Princess, Huyshe's Victoria, Beurré Alexandre Lucas and Directeur Alphand Pears being very fine (silver-gilt medal). Messrs. Spooner and Sons, Hounslow, had a good collection of Apples and Pears, most of the well-known kinds being staged (silver medal). Mr. Berridge, Southall, had a collection of vegetables in variety, including climbing Bean Tender and True, Potatoes, Artichokes, Onions, Kales and salads (silver medal). Mr. Empson, Ampthill House, Bedford, staged six varieties of Carrots, notable for their colour and shape.

Royal Horticultural Society.—The next fruit and floral meeting of the Royal Horticultural Society will be held on Tuesday, November 12, in the Drill Hall, James Street, Victoria Street, Westminster. The committees will meet as usual at 12 o'clock, and at 3 p.m. a lecture on "Substitutes for Larch" will be delivered by Dr. Maxwell T. Masters, F.R.S.

Notes of the Week.

Galanthus Olgæ Reginæ.—To "F. W. B.'s" remarks on this, I may add that here it was out fully six weeks before octobrensis, which opened its first flower to day (October 30). Its bulbs are oblong, while those of octobrensis are round, suddenly tapering to the neck. It is difficult to judge bulbs and other plants fairly this year, because the season was adverse to their free development. G. Olgæ Reginæ ought to be cultivated one or two years more to form a definite decision as to its merits.—Max Leichtlin, *Baden-Baden.*

Begonia Triomphe de Lorraine.—This is one of the finest of the winter-flowering section. I do not know its parentage, but it seems to be somewhat intermediate between the old favourite B. weltoniensis and B. Martiana. It is dwarf in habit; the flowers, which are produced in great profusion, stand well up above the foliage, forming a perfect ball of bright pink blossom almost entirely covering the small pale green leaves. The same plants will keep up a succession of bloom for many weeks. I have plants which have been in flower for fully two months, and they appear likely to continue some time longer yet. —H.

Richardia Pentlandi.—I am sending you a flower of the yellow Richardia from bulbs collected specially for the Hon. Walter Rothschild by my friend and schoolfellow, Mr. C. Ayres, nurseryman, of Cape Town. The bulbs were received from him early in April of this year as the variety Pentlandi. I have flowered several, and all of them have proved true to that name. I find that from amongst over 100 bulbs sent, a few of the spotted leaved kind (R. Elliottiana) have appeared. You will observe in the flower I send there is no crimson at the base, the colour being pure self yellow.—E. Hill.

Frost in Notts.—A frost of unprecedented severity for the time of year, and which was repeated for eight consecutive nights, has occurred in South Notts. The lowest figure to which the mercury fell was 20, or 12° of frost—this, unfortunately, catching everything when in a wet condition; 6°, 7°, and 8° were registered on other nights, the first being the lowest number of all. It is needless to say that gardeners and farmers were not at all prepared for such a sudden and severe change, and that many tender crops have suffered. A good many Potatoes were in the ground on allotments, and, of course, many of the uppermost tubers have been frozen. On Saturday, the 27th, from 3 inches to 4 inches of snow fell in some parts of the county, the woods and hills presenting a most winterly aspect.—J. C.

Tropæolum speciosum in Surrey.—This year I have grown this north, south, east and west, and it has prospered everywhere, provided always that it had a free root-run and a good mulch of fresh road scrapings. On the east I had the finest plants and the finest flowers, owing to the rich soil, but the great blaze was on a hot south border, where it ran up the wall and over the other plants, sometimes in patches and sometimes trailing along like fiery snakes. This plant likes fresh soil and to move itself to fresh quarters. The best plants are always those that have pushed themselves into pastures new. On the north there was a long distance between the flowers, and these came very late. On the west it did the worst, for the soil was not good, but still it grew some 6 feet and flowered.—J. Whitworth Shaw, *New Place, Lingfield.*

Salvia azurea.—There are a few species of Salvia which are very useful in the greenhouse for flowering during the rather dull time which comes just before the Chrysanthemum season. Three especially are worthy of recommendation: S. Betheli, with deep rose flowers, S. splendens var. compacta, with bright scarlet ones, and the subject of the present note, which has blue flowers. The last is rather a tall thin plant and grows 5 feet or even more high. That this habit can be taken advantage of in the grouping and arranging of the plants in the conservatory is well shown in No. 4 house at Kew, where Salvia azurea is grouped with some bush-grown white Chrysanthemums. Although the Salvias are not so full of flowers as they were a month ago, the thin, elegant stems, with their blue blossoms standing well above the white background of Chrysanthemums, make a charming arrangement. It is a plant of the easiest cultivation, and should be grown from cuttings every year. The plants ought to be well fed during the summer, and unless large plants are desired, the cuttings need not be rooted till May.

Lapageria rosea in North Wales.—By to-night's post I send a box of Lapageria blooms and foliage cut from a plant growing outdoors on the north side of a wall, but sheltered somewhat by high vineries. The plant has been growing in its present position about eight years and is now quite acclimatised. The only protection I afford it in severe weather is a covering of old greenhouse shading. Previous to last winter the plant never suffered in the least, but the frosts of last February proved rather destructive to the soft and unripe wood, although all the matured wood came through the severe ordeal without injury. This is the more noteworthy, as Laurustinus, Aucubas, and various other plants in the same garden fared badly, whilst many plants of the double-flowering Gorse were killed outright. For vigorous growth, size and rich colour of the flowers, the plants grown indoors cannot in any way compare with the one the flowers sent were cut from.—R. W. Nicholson, *Bodlondeb, Conway, N. Wales.*

*** The most surprising thing we have seen for some time; the leaves large like those of a good Ivy, the flowers fresh and brilliant, and of stronger and better texture than when grown indoors.—Ed.

Epidendrum purum.—Although in these days the genus Epidendrum is rather a despised one among Orchid-growers generally, it nevertheless contains a goodly number of really charming species. Amongst these the graceful E. purum may certainly be included, for its quiet beauty contrasts with and also enhances the more obtrusive beauties of the Cattleyas, Dendrobiums, &c., that flower along with it. The stem-like pseudo-bulbs are from 1 foot to 1½ feet high, as thick as one's thumb in the middle, but tapering to both top and bottom. The leaves are confined to near the top and are of narrow, lanceolate shape, and 6 inches to 7 inches long. The raceme branches into six or eight divisions and arches out from the top of the stem very gracefully. Each of the divisions of the raceme forms a pretty drooping spray about 10 inches long, on which the flowers are thickly borne; the latter are each about 1 inch across and of a clear, pale green colour. On first expanding, the flowers are fragrant, but afterwards become scentless. The species is a native of the mountains of Colombia, where it was discovered by Purdie, but, according to Messrs. Veitch, it had been known for some years previously, and was in cultivation in the

noted collection of Mr. Rucker at least fifty years ago. The flowers remain for several weeks in perfect condition, and plants that were in bloom in September still retain their attractions.

Rhus typhina.—Amongst the trees and shrubs cultivated for the autumnal colouring of their leaves, Rhus typhina (the Stag's-horn Sumach) deserves a prominent place. It is a small tree or large shrub, with large and striking pinnate leaves 2 feet to 3 feet long, the leaflets being lanceolate, coarsely toothed, hairy, and numbering from ten to thirteen pairs (with an odd terminal one) on each leaf. During the summer they are of a rich deep green, but in autumn change to a dark crimson or purplish red. No shrub appears to colour with greater certainty and regularity, and this year, when many things have failed to put on their proper autumnal dress, this has been as richly coloured as ever. The recent sharp frosts have, however, prematurely destroyed its beauty. The species is a native of North America, extending from the Southern United States northwards to Canada. It is of rather crooked and ungainly growth when it reaches the adult stage, but when grown in a mass for autumn effect, it should be treated as Paulownia imperialis is sometimes done, and cut hard back each spring before growth commences, leaving one or two shoots only to each plant. By this means it is kept low, and the foliage is much larger than that of the full-grown tree.

Elæagnus pungens.—This is one of the evergreen species of Elæagnus, and in the south of England at any rate it is a really valuable and ornamental shrub. An an evergreen it is a welcome contrast to the Pontic Rhododendrons, Laurels, &c., with which so many gardens are overburdened, but flowering as it does during October and November when pretty nearly everything else is preparing for the winter's rest, it ought to be doubly appreciated. The leaves are 1½ inches to 3 inches long, and, like the bark of the young branches, dark brown and scabrous. The upper surface of the leaves is a vivid, lustrous green, but they are beautifully silvery beneath; both surfaces are thickly pitted with small holes, but more especially the under one, which is also specked with small darkly-coloured scales. The flowers are borne in short clusters in the axils of the leaves; they are pendulous, somewhat bell-shaped, and resemble tiny Fuchsia flowers, the perianth being only three-eighths of an inch long. In colour they are of nearly the same shade of silvery grey as the under surface of the leaves. Their greatest charm, however, as hardy shrubs in flower in November is the rich powerful fragrance, very much resembling that of the Gardenia. The species is a native of Japan, and there are several very handsome variegated forms of it in cultivation. A fine specimen is in flower near the Palm house at Kew. Close to it is one also of the nearly allied E. glabra; this, too, is in bloom.

Angræcum bilobum.—Among small-growing Orchids no group is so charming as the dwarf Angræcums. Such species as A. Sanderianum, A. citratum, and others are now fairly well known in British collections. The reverse is the case, however, with A. bilobum, which is now in bloom at Kew. It is rare and very pretty, and at the same time quite distinct. It is, like nearly all the Angræcums, a native of tropical Africa, being found in the Cape Coast Castle region. Although so uncommon in cultivation, it was introduced over fifty years ago, and was figured by Dr. Lindley in his *Botanical Register* in 1841. The most distinctive character of this Angræcum is its foliage; the leaves are about 2 inches long and of a dark shining green, speckled with dull purple dots. They are quite narrow at the base, but widening upwards to the broad, unequally bi-lobed apex. The flowers occur on slender, drooping racemes and are of a pure glistening white. As is the case with several other Angræcums, the parts of the flower are alike in shape and almost so in size, the lip being only slightly larger than the sepals. The flowers, of which half a dozen or more are borne on one spike, are each a little over 1 inch across, the pale green spur being about twice as long. This species, as may be judged from its habitat, requires warm, moist treatment. Most of these small Angræcums are happiest under the treatment given to Phalænopsids, and, on the whole, few Orchids need more care than they do to keep them in health for many years after importation.

A fine Todea superba.—A plant of this has been under my care for the last twenty-seven years, and a few remarks as to the treatment it has had may not be out of place. A very small plant was obtained for fifteen shillings. It was carefully protected with a bell-glass and placed in a warm house, the compost used being fine peat with a good portion of sand; it was given plenty of water. As I found that this treatment did not answer, I repotted it in a good portion of Sphagnum, well dried, and gave less water at the root. It was kept constantly damp overhead and in a much cooler place, the bell-glass being discarded. With this treatment the plant got on well, and in two or three years I had to shift it into a 14-inch pan not more than 6 inches in depth, using the same material for potting. It is now in a cold pit with only a 5-inch wall. In the winter of 1878 we had 32° of frost, but with a little rough manure round and a couple of mats on the top, and though covered up for a fortnight, the plant was quite fresh. The next shift was into a 20-inch pan, using the potting material more lumpy than before. It is now in a house having a north aspect, but no heat. In three or four years it has made a mass of roots, running down outside the pan. The last shift given was into a pan 26 inches wide and about 8 inches deep. The foliage of five years' growth is quite fresh and completely covers the surface of the pan. The plant now measures 7 feet from tip to tip. A good supply of water is given when growing, but is discontinued in winter, so as not to excite the plant into growth before the proper season. The plant is syringed once or twice a day in summer and occasionally in winter. The thermometer last year fell to 9° below zero, and the only heat that reached the plant was through a door that opened into a house kept at 45°. A pan of Trichomanes radicans measuring 5 feet across standing near makes a good companion.—H. Wand, *Brinkburn, Darlington, Yorks.*

*** The photograph sent with the above showed a remarkably fine specimen of this Fern, proving that the treatment given suited it.—Ed.

The Tree Tomato.—The Tree Tomato (Cyphomandra betacea) is, though perhaps not to be recommended for the flavour of its fruit when grown in the British Isles, a most handsome plant in appearance. In the winter of 1893 I received three seeds which had been brought home from Ceylon. In due time the plants appeared, and when about 2 feet high were planted out in a large span-roofed Tomato house. They grew at a prodigious rate, and by the autumn had reached a height of 10 feet and had opened a few clusters of whitish, solanaceous flowers at the extremity of the stalk, which up to within 1 foot of the top was branchless. Some of the leaves were very large, being 2 feet in length by over 1 foot in breadth, and possessed a most evil odour, insomuch so that many persons found it necessary to thoroughly wash their hands after touching them, In the frost—no heat being kept in the house during the winter—the leaves died and the tops of the stems were cut off. This spring the plants sprouted all up the stem, and the lower growths being rubbed off, eventually formed large heads, which in time flowered and produced quantities of fruit. The latter was in clusters, the individual fruits being smooth and somewhat egg-shaped, more pointed at the apex than at the base, and turning a dull orange-red when presumably ripe. As far as my experience goes, the fruit is equally unpalatable whether cooked or raw. I understand that the plant is a native of South America, and was from there imported to Ceylon and India, where it is now common. It is distinctly striking and ornamental when laden with fruit and flowers, its large leaves having quite a tropical effect, but nothing but discomfort is to be gained by handling it or partaking of the fruit.—S. W. F., *Torquay.*

The weather in West Herts.—A week of variable weather as regards temperature. During the night of the 2nd inst. the exposed thermometer showed 7° of frost, whereas three nights afterwards the same instrument never fell lower than 44°. Since the beginning of the week the temperature of the soil at 2 feet deep has risen 2°, and at 1 foot deep as much as 6°, and at the latter depth is now about seasonable. Rain has fallen on each of the last four days, and to the total depth of 1 inch, so that the ground is once more quite saturated. Yesterday (the 5th) was the most windy day for a month, and yet the wind at no time exceeded in strength what sailors would call a "fresh breeze," showing how calm the weather had previously been.—E. M., *Berkhamsted.*

Books.

Les Azaleas.*—A handy book on Azaleas and their culture under glass and out of doors, including chapters on grafting, proper soils, manures, diseases and insects, the varieties of the plant and the best methods of packing for the market; also chapters on the so-called hardy Azalea of Ghent—Azalea mollis and Azalea amœna.

The New Forest.†—This is an agreeable, chatty book on our most famous forest. There is no attempt to go deeply into the vexed question of forest management which occupies the attention of experts at the present time. The authors, too, make light of the historical account of the origin of the New Forest, and they have a somewhat far-fetched theory of their own to account for the death of the "Red King" while hunting among the New Forest glades, into which it is not necessary at this remote period to follow them. Apart from some unorthodox conjectures and speculations, the reader will find a good deal to interest him in the chapters which deal with the forest, its beauties, customs, sports, geology, inhabitants, fauna, flora, &c. Few will fail to sympathise with the authors' hope expressed in the concluding chapter that this beautiful region may never become another black country. Yet there appears to be some justification for the fear which is implied, since it is now a generally accepted belief that the New Forest forms a link in the chain of coalfields which once extended from Somersetshire to Belgium. It is to be hoped that having given us one charming volume on the New Forest, the authors will not allow their pens to grow rusty, but will follow it up with others on a subject which they know so intimately.

Names of plants.—*Lady Maitland.*—Cattleya Dowiana.——*F. S. Phillips.*—Grevillea robusta.——*Jones.*—Brassavola cuspidata.——*S. H. B.*—Phlomis fruticosa. ——*Constant Reader.*—Cotoneaster affinis. ——*Neil Sinclair.*—Linaria vulgaris.——*C. S. B.*—Ilex latifolius.

Names of fruit.—*H. P.*—1, Claygate Pearmain; 2, Striped Beaufin; 3, Rosemary Russet; 4, not recognised; 5, Pear Beurré Clairgeau; 6, Beurré Capiaumont.——*E. Semper.*—1, Marie Louise d'Uccle; 2, Winter Nelis; 3, Beurré Rance; 4, Marie Louise; 5 and 6, next week.——*W. R. C.*—1, Sops in Wine; 2, Kerry Pippin.——*M. McMillan.*—1, Pear Marie Louise d'Uccle; 2, Marie Louise; 3, Souvenir du Congrès; 4, Vicar of Winkfield; 5, Catillac; 6, Apple Ribston; 7, not recognised; 8, Ecklinville; 9, Cellini; 10, Cox's Pomona; 11, Warner's King; 12, Lord Derby; 13, Small's Admirable; 14, King of the Pippins; 15, Wyken Pippin.——*J. O. M.*—2, Passe Colmar; 4, Doyenné Boussoch; 5, Beurré Bachelier.——*Nemo.*—1, Lord Suffield; 2, Beauty of Kent; 3, Mère de Ménage; 4, not recognised; 5, Cox's Pomona; 6, Small's Admirable.

* "Les Azaleas." By Leon Duval. Illustrated. Octave Doin, Paris.

† "The New Forest." By Rose C. de Crespigny and Horace Hutchinson. Illustrated. John Murray.

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"This is an Art
Which does mend Nature: change it rather; but
THE ART ITSELF IS NATURE."—*Shakespeare.*

STOVE AND GREENHOUSE.

COLOUR IN CARNATIONS.

WITH reference to the catalogue descriptions of colours of Carnations and other plants, "E. J." in THE GARDEN (p. 299) complains that the descriptions are often misleading. No doubt this is so in many instances, but I do not think it is done with the intent to mislead. It is only those who have to describe new varieties who know the difficulty of properly giving the many shades found among Carnations. Besides this, opinions differ much as to the most correct definition of the various shades. I do not know the variety William Scott referred to by "E. J.," but with respect to Miss Joliffe being a good shade of pink there is little doubt, though I should describe it as flesh-pink. Mrs. Leopold de Rothschild is a difficult variety to describe. I have seen blooms of this which have been of quite a deep shade of rosy pink, while in some instances they have been even paler than those of Miss Joliffe. There are also other varieties which vary equally as much. In describing the colours of the various classes of plants, it becomes somewhat a matter of practice rather than accuracy. Take, for instance, the scarlet Sweet Pea or the scarlet Stocks; they certainly differ in colour from the scarlet Geraniums. Reverting to Carnations, the so-called crimsons are perhaps as far from the mark as any. Take the deep claret-coloured Uriah Pike, Duke of York or Mrs. Hemsley, they are all of too deep a shade for crimson proper. I herewith send you a bloom of Leonidas, which is to my idea the true crimson, though it might be described as deep scarlet. Taking colours as they are found in Carnations, there are many shades, yet it is possible to follow the source from which they are obtained. For instance, a pure white, crossed with bright scarlet, such as A. Alégatiere, will give the soft flesh-pink shades usually, while the whites crossed with purple will give the slate-coloured shades. Mrs. Llewellyn is quite a different shade of pink from that of Miss Joliffe, having a shading of purple in it. In Bouvardias we have some distinct shades of pink. In Priory Beauty there is a shading of purple, while Mrs. Robert Green has more of red shaded pink. This may be seen best under artificial light, the latter showing up much better than the deeper shade of Priory Beauty.

Although in so many plants we get such an enormous variety of shades, yet it is remarkable that yellow and blue are rarely met with in the same class of plants. The Pansies are the only instance I can recall where the two colours are found. The entire absence of blue in the Rose, Carnation, Dahlia and Hollyhock is remarkable, as almost every other conceivable shade of colour is found.

Perhaps the plant which has caused more disappointment with regard to colour than any other is the so-called blue Chinese Primula, which, when seen under the very best light possible, is of sombre appearance, and under the slightest disadvantage is not worth looking at. Curiously enough, there is not a good yellow Chinese Primula, though the deep yellow eye and the other yellow species would lead one to suppose that there would be no difficulty in getting a good yellow. A. HEMSLEY.

Cimicifuga simplex.—Cimicifuga racemosa, a North American plant introduced into this country a century and a half ago, is the best known member of the genus, but there are other desirable kinds, and one bearing the name of C. simplex forms a very attractive feature in No. 4 house at Kew. The genus Cimicifuga is a near relative of the Ranunculus, but the plant in question has a good deal of the appearance of a strong-growing Spiræa. The large compound leaves are very much like those of Spiræa Aruncus, while the entire plant reaches a height of 5 feet or thereabouts. The white flowers are borne in branching panicles, and in many cases the closely packed blossoms extend for quite 9 inches along the spike. From the mass of protruding anthers a spike of blossom has a good deal the appearance of a Bottle-brush. As seen at Kew it is certainly a very desirable plant for the greenhouse or conservatory early in the autumn, at which time as a rule Chrysanthemums form the major part of the floral display, and the loose open habit of the Cimicifuga is in direct contrast to the more lumpy growth of the Chrysanthemums.—H. P.

Coprosma Baueriana variegata.—Twenty-five years ago or thereabouts, when this Coprosma was comparatively new, it was propagated as rapidly as possible by many of our leading nurserymen, as at that time plants with variegated foliage were extremely popular, and it was also adapted for the style of bedding-out then in vogue, that is in which long straight lines of one particular subject were used. Though occasionally employed as a bedding plant, it is not very much used for that purpose; indeed, many gardens may be visited without meeting with it. Still, it forms a very attractive shrub from a foliage point of view for the greenhouse, and one, too, that can if necessary be turned outside during the summer. If in good health, the bright shining green leaves with their decided variegation render it one of the most admired of greenhouse shrubs. It is not at all a difficult plant to propagate, especially if the stock plant is kept a little closer and warmer than usual. In a structure that is too cool to maintain a winter display of blossoms, such fine-foliaged plants as this Coprosma will present a cheerful appearance throughout the dull season. Another fine-foliaged plant well adapted for association with it is the Japanese Eurya latifolia variegata, a Camellia-like shrub, with its leathery leaves variegated in different ways with white and pink.—T.

Alberta magna.—This promises to be a decidedly ornamental shrub for the greenhouse—that is, if it blooms freely when large, for at present the plants of it to be met with are only small, and consequently do not flower much. It was very noticeable at Kew lately, and the blooms remained in perfection a considerable time. It is a free, upright-growing shrub, of sturdy habit, clothed with ovate leaves of a deep shining green, while the flowers, which are borne in terminal panicles, are individually tubular in shape, little more than an inch long, and of a very bright crimson tint. The large calyx lobes are said to change after the flowers have dropped to a bright red colour, thus forming another noticeable feature. This Alberta is a native of Natal, and was as a new plant distributed by Mr. William Bull, of Chelsea, in 1891. It succeeds well under ordinary greenhouse treatment, and with regard to soil, it prefers a fair proportion of peat and a good sprinkling of rough sand. Most of the earlier plants distributed were seedlings, and as cuttings can be struck it will perhaps after a time flower more freely in a small state than it does now. The weaker shoots make the best cuttings.—H. P.

Veronica Purple Queen.—This fine variety, which was sent out by Messrs. Veitch and Sons last year, has been flowering freely with me throughout the autumn. The plants were from cuttings struck early in April. It is a plant which requires very little skill to grow it successfully. The earlier in the year the cuttings can be put in the better. The young plants should be potted off singly as soon as they are well rooted. They require stopping about three times, and will then make fine bushy plants for 5-inch pots. After the final shift, the pots may be plunged in the open ground, or if planted out they will make good plants to take up and pot in the autumn, but then do not flower so freely as when grown in pots, especially if planted in rich soil. Although the colour is against it for some purposes, yet for the conservatory or window boxes it is very useful, and the pleasant perfume is a further recommendation. I may add that some plants standing in a sheltered position out of doors are quite unharmed by the recent frosts, though we have registered 12° and plants have been frozen through.—H.

CROTONS.

THESE beautiful plants have in the past been much neglected, but they are now coming into favour again, as the fine displays which have been seen at various exhibitions during the season testify. As variegated-leaved plants Crotons undoubtedly hold first place, no other class of plants giving such a great variety of either form or shades of colour. Large specimens are very attractive when well grown, yet it is in the smaller sized plants that their beauty is seen to the greatest advantage, while such plants are also more useful. As table plants they are much in demand, and for this purpose the plants should not exceed 18 inches in height. The narrow-leaved varieties are most appreciated for table decoration, while the broad-leaved sorts are better adapted for grouping.

To grow Crotons successfully they require a high temperature and to be fully exposed to all the light obtainable, and though a little shading may be necessary during the hottest part of the day for a few weeks in the summer, the less they are shaded the brighter the variegation will be. If careful attention is paid to the watering and a moist atmosphere maintained, Crotons will withstand the brightest sunshine we get—that is, provided they have been grown on from the time of starting into growth in the spring under such conditions, but it would be fatal to plants which had been growing freely under shading to fully expose them when the growths are young and tender.

Crotons do not require much pot room—in fact, they are all the better for being confined to comparatively small pots, 4½-inch pots being quite large enough for plants from 18 inches to 2 feet high. They succeed in any ordinary compost, but good drainage should be given, and if grown in a light sandy compost they keep their variegation better than when in a richer soil. After the pots are well filled with roots, a little liquid manure may be used from time to time until the plants have made their growth. Cow manure and soot make the best liquid manure, but it should be made some time before it is required for use, so that it may settle down and be used when quite clear.

The best time for propagating Crotons is from now onwards to the end of January. If good-sized tops are taken from plants with well-matured growths they will root freely in the stove propagating pit. A little dry sand should be applied to the base of the cuttings as soon as taken off; this will prevent bleeding, and the cuttings will not be so likely to rot at the base. The cuttings should be kept quite close and shaded until they begin to make roots; with care large cuttings may be rooted without losing a leaf. One important matter is to keep the plants free from insect pests; like most plants requiring a high temperature, they are subject

to the attacks of thrips, red spider and other pests. If the plants are properly cleansed by sponging and fumigating, the syringe, if properly used, will go a long way towards keeping them clean afterwards.

Varieties.

These are so numerous and varied, besides which, when seen under different conditions they vary so much, that it is difficult to make a selection and keep within a reasonable limit. Many of the older sorts still hold their own. C. majesticus, for instance, is undoubtedly one of the best of the long, narrow-leaved varieties, and may always be relied on to colour well. Angustifolius, though more difficult to grow, is when well done one of the most beautiful. Countess and Superbus are both good narrow-leaved varieties and rarely run out of colour. Golden Ring is a newer variety, with long, narrow-twisted leaves, the variegation being of a rich golden hue. Flambeau is a very highly coloured variety, the deep golden variegation changing to a rich crimson hue. Ruberrimus is another good narrow-leaved variety, which changes to a rich crimson. Of broader leaved varieties which change to a ruddy hue, Musaicus, Etna, Formosus, Newmani, Mortefontainensis, Flamingo, Emperor Alexander III., and Gordoni are among the best. Of those which retain the yellow, Thompsoni is one of the most effective, and Mortefontainensis is another which may be strongly recommended. Earl Derby, which has a broad linear marking of bright yellow, is very pretty, but rather inclined to revert to green. Warreni, Prince of Wales, Massangeanus, Bergmani, and Lady Zetland are others which should find a place in every collection.

Croton leaves are now much used for decoration, and most of those referred to above will be found very useful for the purpose. Elegantissimus often makes shoots with the terminal leaves pure golden yellow, and these may be used with fine effect in bouquets. H.

Urceolina pendula.—There is no danger of confounding this Urceolina with any other bulbous plant now in flower, as the blossoms are remarkably distinct, and at the same time very beautiful. Various notes on this plant have appeared from time to time in The Garden, and a coloured plate of it was given May 12, 1888, but it is so charming just now as to well merit a passing notice. The foliage is very like that of the Eucharis, to which, indeed, it is closely allied, though in general appearance the flowers are very different, presenting as they do the appearance of an inverted urn. The body of the flower is of golden yellow colour, while at the mouth where the segments are divided it is green. The best time for repotting this Urceolina is early in the year, and after this the plants will still start into growth, and towards the end of the summer the leaves will die off. When this takes place water must be given more sparingly, but the soil must not be allowed to become too dry. After this the flower-spikes will soon make their appearance, but the plants are by no means regular in their blooming, which in a general way is an advantage, as their season of flowering is spread over a much longer period than would be the case if they all threw up their spikes at once. This plant, which is also known by the specific name of aurea, is a native of Peru, and was discovered by Mr. Pearce when travelling for Messrs. Veitch, of Chelsea, during the year 1863, and it first flowered in their establishment a year later. Its affinity to the Eucharis suggested to Messrs. Clibran a hybrid between the two, and Urceocharis Clibrani was the result. The flowers of the hybrid are in shape more like those of the Urceolina, while the colour is white, as in the other parent. It seems to bloom at various seasons of the year, but chiefly in spring and early summer. When strong enough it is probable that flowers will be produced continuously for lengthened periods.—H. P.

Siphocampylos Humboldtianus. — Good plants of this will, if placed under favourable conditions, be very rarely without flowers at any season of the year. An illustration of this is to be found in the fact that, though frequently alluded to in the different horticultural publications as a summer-flowering plant, it is now blooming just as freely as it was in July, and bids fair to continue for months. It is also known as S. fulgens. When in good condition it forms a freely-branched plant of a half-shrubby character, clothed with dark green leaves and plentifully sprinkled with its bright scarlet tubular-shaped blossoms. A soil consisting of good loam with a liberal amount of leaf-mould and silver sand will suit it well. Liquid manure occasionally is also of great service, as a little additional stimulant applied in this way is better than putting the plants into large pots. S. Humboldtianus is a native of Peru, whence it was introduced in 1867. The temperature of an intermediate house will suit it best. Though the genus Siphocampylos consists of nearly 100 species, it is very rarely that any other kind besides that above mentioned is to be met with.—T.

Acacia platyptera.—There is no danger of confounding this Acacia with any other species, for the curiously winged stems are so very distinct, added to which it is now in flower, while the other members of the genus (or at least those in general cultivation) bloom in the spring. The wings, which are arranged on either side of the stems and branches, are green, and in some instances nearly half-an-inch wide. The flowers are disposed in the shape of little balls along the shoots and are of a bright golden yellow; they remain in perfection longer than those of the spring flowering members of the genus, and a succession is kept up for some time. This Acacia is a native of the Swan River district in Western Australia, and was introduced into this country in 1840. It is not very easily propagated from cuttings, and is also less vigorous in growth than many of the others.—T.

Chrysanthemums.

Chrysanthemums at Trent Park, Barnet.

In some notes referring to the chief exhibition at the Aquarium last year I stated that the first prize forty-eight Japanese blooms from Mr. F. Bevan, and staged by his gardener, Mr. W. H. Lees, were the finest ever exhibited. Inspecting the collection recently, I could not help observing the splendid growth of the plants. This is not, however, the time to speak much of cultural items, but I may say Mr. Lees takes each individual variety and adapts his mode of treatment to the constitution of the same. The result is very few mistakes indeed, and when it is borne in mind that Trent Park is very rich in novelties—that is, in sorts about which little was known before—such success is the more remarkable. It is of the lately-introduced Chrysanthemums I would like to make a few notes. In speaking of the size of any sort I may say the measurements are mental.

White Varieties.

Mlle. M. A. de Galbert has a bloom 7 inches across and of similar depth, with rich, flat florets hanging in wave-like form. The colour is white and the quality is superb. I am pretty certain this variety will be more highly esteemed than is Mlle. Thérèse Rey. It was raised by M. Ernest Calvat.

Mutual Friend is an American-raised kind. The flowers are pure white; the florets wide, thick and long, forming perhaps a somewhat flat bloom, but of very fine substance. The growth, too, is dwarf, and in other respects all that can be desired.

Mme. Carnot is a charming pure white, of exquisite formation. The bloom is large and of fine quality; the type is pure Japanese, that is, informal in arrangement, yet with a finished outline.

Mme. Ad. Moulin.—This white, though in cultivation some time, is but little known; but when Mr. Lees' specimens are seen there will be many who wish to possess it. The variety has very long drooping florets, forming a mass over 6 inches across, the depth considerably more. It is a handsome flower, and the plant seems of easy growth.

Mme. Ad. Chatin.—This is a beautifully formed, loosely incurved Japanese of immense size, pure sparkling white and of rich substance; undoubtedly the finest of this particular type. It is dwarf in growth.

Souvenir de Petite Amie.—Another pure white handsome form. The petals reflex and build up a full massive blossom of large size, of notable substance, and richness of texture. Habit very dwarf. It may be well to note that late buds come best.

When such grand Chrysanthemums as the above become more widely known, the old sorts as Avalanche, Stanstead White, and so on will be discarded. That promising white of last year, Philadelphia, is not a success, nor does Mrs. C. E. Shea exhibit any merits yet. The newer yellows are represented by

Phœbus, one of the grandest of Chrysanthemums. The blooms are large, full, and deep, with wide petals of extra substance and richness. The colour is pure chrome-yellow, and the growth all that can be desired.

Amiral Avellan is a magnificent bloom with somewhat pointed florets. It is a huge, full massive flower, with a deep yellow shade of especial richness. A dwarf, easily grown kind.

Pallanza.—From the first I thought much of this variety; and although the flowers I had subsequently seen appeared too small to suit the tastes of exhibitors, my early opinion is confirmed by the splendid blooms at Trent Park. They are of extra depth, full, and exceedingly rich. The colour is a deeper shade than that of Sunflower, and with that exception much like it in its best form. Little more need be said to commend it.

M. Pankoucke is a true Japanese, full, deep, and of curling formation; an especially fine show flower of M. Calvat's raising.

Thomas Wilkins is a very fine large Chrysanthemum, and on that account will be popular, but personally I do not like to compare it with the few yellows I have already named. The formation is excellent, but the colour somewhat dull. A yellow that has failed to maintain its promise in this collection is Duchess of York.

The more striking among dark shades and other colours were—

M. Georges Biron.—A splendid dark crimson flower. The florets reflex, and thus show the dark shade which is welcome among so many light colours. This is a fine addition.

M. Ch. Molin is a bronzy yellow, of great beauty. It has flat florets, and the blooms, although not of extra size, are full, deep and striking. The growth is excellent in this case.

Mrs. W. H. Lees ought, perhaps, to have been included among the whites, but there is just a shade of pink in the lower portion to prevent it.

Deuil de Jules Ferry is scarcely open, but it promises to be an acquisition among dark-coloured flowers.

Mephisto is a huge bloom, of a reddish buff shade. There does not, however, seem to be much character in the formation, but the growth is extra dwarf. M. R. Ballantine, Directeur Tisserand, and Reine d'Angleterre also promise well. These are not yet open. Among the older sorts, E. Molyneux, Col. W. B. Smith, Viviand Morel, Mlle. Thérèse Rey, and many other noted Japanese

sorts are in magnificent form. The chief incurved flower of recent date is undoubtedly

Globe d'Or, one of the very best of that class ever seen. I should say the blooms measure nearly 6 inches by 5 inches, and have a perfectly finished appearance. The colour is buff-yellow. This sort is highly thought of by Mr. Lees.

J. Agate.—This is a magnificent spotless white of very fine incurved shape. It is as large as the finest Empress of India—something that should recommend it.

Robert Petfield is a very fine pink flower, large, full, and deep. When the final touches are given to the specimens at Trent Park they will be among the best of the incurved blooms. Wm. Tunnington is promising, so also is Mrs. R. C. Kingston, but absolute failures are John Fulford, Owen's Crimson, Chas. H. Curtis, and others. I may, however, refer to these when I have seen them in other collections, for it is advisable not to condemn a variety unless seen in indifferent form everywhere. H. S.

CHRYSANTHEMUMS AT CAMBERWELL.

There are many difficulties in connection with growing the Chrysanthemum in close proximity to the heart of the great metropolis, but Mr. Norman Davis, of the Lilford Road Nurseries, always seems to overcome them. For some years past, probably fourteen or fifteen, the Lilford Road collection has always ranked as one of the leading trade displays, and has been a popular place of public resort during the autumn season. Mr. Davis has several glass structures full of plants in full bloom, but the chief interest must, of course, be centred in the large show house, so well known to all amateurs and visitors to Camberwell.

All the leading novelties of the past few years are to be found at Camberwell, whether they be of Continental or of American origin. Among Japanese, which, of course, are greatly in the majority, we noticed a thoroughly representative collection of Ernest Calvat's novelties, such as Dr. Allard, a Japanese incurved, a deep golden yellow, lined chestnut-red inside; Vice-President Calvat, a highly-coloured, mop-like flower, of crimson and gold; Mme. Carnot, a grand white Japanese, introduced two seasons ago; M. Gruyer, rather broad florets, curly at the tips, colour rosy mauve, tinted yellow in the centre. President Borel, now well known, is also in fine form. M. Pankoucke, a rich yellow Japanese, certificated by the N.C.S. last season, is also likely to maintain its reputation. Souvenir de petite Amie, white and dwarf, is also in good form. Another grand white, Mlle. Thérèse Rey, too well known to require description here, is still regarded by Mr. Davis as the best of its colour. M. Ch. Molin, Louise, and one or two others from the same source are also entitled to a special word of mention. Other varieties of E. Calvat's are Reine d'Angleterre, certificated last season, rather a loosely-built flower, somewhat like a rosy purple Condor, and Amiral Avellan, only sent out this spring, a very rich shade of golden yellow and a most promising variety, as it is good wherever we have seen it.

The other Continental growers are represented by Globe d'Or, a finely-incurved variety, rather large in size and of a pure golden yellow-tinted bronze; by Comte Lurani, a charming Japanese, figured in The Garden of September 29, 1894, and of a beautiful shade of rosy pink on a white ground; M. Joanny Molin, brilliant crimson, but rather small for a Japanese; and Junon, a fine Anemone, of pale lilac, with fine ray florets. Mme. Paul Lacroix, pale sulphur-white, rather large, and Hamlet, introduced many years ago, but still a grand shade of salmon-carmine, with a golden reverse, maintain the reputation of growers like M. Simon Délaux and M. L. Lacroix. Viviand Morel, raised by the latter-named gentleman, is always good, and even in America regarded as one of the best. Th. Denis, Mlle. Mélanie Fabre, Le Deuil (a well-known Anemone), Descartes (also an Anemone, and one of the finest tones of colour in the section—rich velvety, vinous crimson, with a high centre speckled gold), and M. R. Bahuant, an incurved now in general cultivation, all come from the other side of the Channel.

American novelties of course at once suggest the name of Philadelphia, the much-vaunted Japanese incurved, which received a silver-gilt medal at the Royal Aquarium last November, after being sent 3000 miles across the Atlantic. As growing at Camberwell and at other places it cannot be fairly described as a white; the colour is really a pale sulphur-yellow. Mrs. R. C. Kingston, a variety raised by Mr. Surman, of Philadelphia, is a fine type of the true incurved, and was certificated as such last year. This seems to maintain its form, a rarity with most of the best American kinds; the colour is lilac-pink, and the blooms are something between a Princess of Wales and a Princess of Teck. G. W. Childs, a rich velvety crimson, is exceptionally fine; Mrs. E. G. Hill, introduced last year, is early, and a good pale pink Japanese very round in form. Niveum, a fine white Japanese, also keeps its good name. A new variety, Major Bonaffon, is not at the time of writing sufficiently expanded to say whether it will be of the true incurved or the Japanese incurved, but the colour is pure and clear, a decided yellow. J. H. Runciman has broad florets notched at the tips, and is a variety of the Japanese section, colour rich golden yellow.

Passing on to home-raised and other varieties, we found H. Shoesmith, a Japanese with long drooping florets, colour pale lemon-tinted canary, in good form. Pallanza, a grand golden yellow Japanese, and William Seward, very dark crimson, were also much in evidence. Charles Davis, the rosy-bronze sport from Viviand Morel, still remains as good as ever. Lady Byron, a new white Japanese recently certificated, but not yet in commerce, is also considered to be a most promising novelty. Pride of Madford, a rich shade of rosy-amaranth, is a seedling raised in Australia. Mrs. E. S. Trafford, a rosy-bronze sport from Wm. Tricker, is fairly well known, and William Bolia, rosy-purple amaranth, is a bright-looking Japanese kind.

In the small house adjoining Mr. Davis has an interesting collection of all the old Anemone and reflexed sorts, which he has collected for purpose of identification. There are about a hundred varieties of Anemones and thirty varieties of reflexed, many of which present-day cultivators would hardly know.

There were still a few early-flowering varieties at the time of our visit; one, Commt. Schneider, a small reflexed Japanese not unlike old Progne, was violet scented. There was a large number of the white and yellow forms of Lady Selborne, Ryecroft Glory, Lady Fitzwygram, Chev. Ange Bandiera, Saml. Barlow, Arthur Crépey, M. Louis Lionnet, Mme. Hy. Devered, and others of the early group.

Chrysanthemums in fruit houses.—I have always been opposed to putting plants into fruit houses even if occupying only side shelves or stages, but what is to be said of the present-day system of blocking up Peach houses and vineries with Chrysanthemums in October? At this date Peach trees, especially in late houses, have still much of their foliage left on them, and the roots need all the air and sun possible, as unmatured roots mean unripened wood and badly developed fruit and wood-buds. Moreover, the best and most fibrous portion of the roots which lies nearest the surface of the border is kept in a saturated condition by the repeated watering of the Chrysanthemums, the case being rendered much worse when the pots are stood on the bare border and not on bricks or trellises. Depend upon it, the deterioration of many fine healthy Peach and Nectarine trees is due entirely to crowding the house with Chrysanthemums. Many gardeners also lacking space are compelled to use their vineries for the same purpose, closing the ventilators and even employing fire-heat in order to shield the foliage from frost or keep the blooms from damping, and this, too, at a time when the utmost coolness and even a few degrees of frost would be a boon to the Vines. Of course, the plants must be accommodated somewhere, but while congratulating all those who are fortunate enough to possess a large conservatory, carriage court, or some such structure capable of holding all their stock, I would urge upon others lacking this convenience the necessity of storing as many of their plants as possible in houses not containing fruit trees, and as few as possible in vineries and Peach houses.—J. C.

Fragrant Chrysanthemums.—A few years ago there was some little interest in these, and the names of several varieties were recorded in The Garden as possessing the peculiarity of perfume. Commandant Schneider, a small Japanese of reflexed form, colour purple-amaranth, was pointed out to me the other day by Mr. Davis, of Camberwell, and the perfume was undoubtedly that of Violets. More recently at Swanley, Messrs. Cannell's foreman showed me a variety called Striped Odorata, a small blush-coloured Japanese with a stripe of yellow down the middle of each floret, which smelt sweetly, although it was difficult to say what its scent was like. It seems that hot, dry weather is favourable for the detection of sweet-smelling Chrysanthemums, as both growers pointed out that it was always more noticeable under such circumstances. — Chrysanth.

CHRYSANTHEMUMS AT LEWISHAM.

Many growers and admirers of the popular autumn flower will remember Mr. H. J. Jones settling down at the Ryecroft Nursery, Hither Green, Lewisham, some five years ago, and must be astonished at the rapid, but well-deserved success that has attended him as a raiser, grower, and importer of new Chrysanthemums. As an exhibitor at some of the large shows his departure from beaten tracks, but particularly the artistic displays of cut blooms in vases, which he was the first to bring into prominence, excited great attention from many who had become tired of the ordinary crowded groups usually met with, and called forth much praise from those who could properly appreciate the innovation.

Our visit to Ryecroft Nursery was made this year towards the close of October, and although we expected much we were by no means disappointed, for the collection was in a very advanced state, there being but few flowers undeveloped. There are several large greenhouses in which Chrysanthemums are housed, and the Ryecroft collection contains a large percentage this season of finely grown varieties of recognised merit besides all the novelties from the home and foreign raisers. It is probably the largest and most representative collection of new Chrysanthemums in the United Kingdom, and bears evidence of close attention and continuous labour in the admirable way in which the plants display their blooms.

This year an alteration has been made in grouping the Chrysanthemums in the large show greenhouse. A bank of plants runs down the middle of the house the whole way, a narrow bank being placed down the sides, leaving a sinuous, winding path between. It seems to be an improvement on the plan adopted in previous years, when there was only one path down the middle and a group of plants on each side. On entering, the visitor is struck with the brightness and clearness of colour visible and the tasteful method of arranging the colours. There are some splendid examples of cultural skill in many cases, the flowers of William Seward being the finest we have seen. There are large numbers of some of the old established favourite varieties such as Charles Davis, Col. Smith, Mrs. E. S. Trafford, but newer ones like Mrs. E. G. Whittle, Phœbus, Pallanza, Miss Ethel Addison, M. Ch. Molin, C. H. Curtis, D. B. Crane, Descartes, A. H. Fewkes, &c., can be found in quantity.

Dealing first with Continental novelties, the seedlings of that eminently successful grower, M. Ernest Calvat, claim the premier position. M. Ch.

Molin, a Japanese, rich yellow and bronze, is very attractive; President Borel, another well-known kind, needs no description; Mme. Ad. Chatin, a fine white Japanese, is in good form, as is also Deuil de Jules Ferry, a rosy amaranth and silvery Japanese of a very rich tone. Amiral Avellan is a very fine golden yellow Japanese; Souvenir de Petite Amie, white, and Louise, a massive incurving Japanese, recently seen at the shows in excellent form, maintain the opinion formed of them several years ago when first introduced and certificated. Mme. M. Ricoud is useful for amateurs, as it comes easy; it is a Japanese of globular form, colour pretty shade of rosy pink tipped white. L'Aigle des Alpes is very distinct; it has rather broad florets, incurving at the tips, colour carmine-crimson with golden reverse. M. J. Ginet is a Japanese, colour purplish amaranth, silvery white reverse. Mlle. Thérèse Rey, the finest white Japanese in existence, both here and in New Zealand, also substantiates its claim to superiority. Commandant Blusset, rich purple-amaranth, is also a Japanese of striking colour and effect. M. J. Lallemand, although a novelty of 1895, is too long in the floret and too loose even for a Japanese, and Reine d'Angleterre, very large, but loose, is a white Japanese, suffused purple. Very bright in its crimson and gold is M. B. Giroud, a deep, round-built flower of good Japanese form. Noces d'Or is of a fine clear shade of golden yellow, an incurving Japanese; Mme. Carnot, a large white Japanese; and President Carnot, crimson-carmine and golden reverse, are both in good form. Boule d'Or seems likely to be one of the greatest favourites with those who like the large, solid incurved Japanese, the colour, a golden amber, being very distinct. President Armand, Directeur Tisserand and many others are equally meritorious.

Other French growers, such as M. Lacroix and M. Hoste, are also represented, and several others whose names are not so familiar to English growers. Phœbus, a new yellow Japanese of a rich golden shade, and Linnée, a Japanese incurved, chestnut and buff, both come from the former raiser. Mme. Paul Lacroix is another, a Japanese of pale sulphur-yellow passing to primrose. M. Ch. Delahousse is very distinct, a fine velvety purple-amaranth, silvery pink reverse, a Japanese. La Garonne, a pretty Japanese of medium size, suffused rosy pink, centre tinted yellow; Sirène, a Japanese reflexing bloom, pale blush, and Jean Bart, a Japanese, colour terra-cotta with golden reverse, a warm shade of colour, are all worthy of a note. Then Tendresse, a Japanese, rather loose in build, but of a delicate blush, tinted yellow, Globe d'Or, one of the few real incurved kinds from France, a fine form, colour pure golden yellow, and others such as Duchesse de Grammont, Surprise, M. Aug. Lacvivier, Phryné, Guirlande, C. Darville, Mme. Rozain, Le Fringant, M. Catros Geraud, &c., arrest attention.

American seedlings are not quite so numerous or so fine as we might have expected, excepting here and there. Home-raised seedlings and one or two Australian novelties help to swell the collection, and it is pleasing to record that some of the English amateurs, like Mr. Shea and Mr. Briscoe-Ironside, are still busy at the work, and, knowing the requirements of the English exhibitor, are less likely to work haphazard than some of the foreigners seem to do. Mrs. C. E. Shea, the large white Japanese introduced this spring, is pale sulphur in colour, but a later bud is suggested where greater purity of tint is required. Miss Ethel Addison, a large incurved Japanese, amaranth and silver; Mutual Friend, a large white American Japanese; and Pallanza, rich golden yellow, are all faultless both in size and colour. King of the Chrysanthemums is striking; it is a golden buff Japanese. Miss Clara Walker, a large pure white Japanese, is remarkable for its length of floret. A. H. Fewkes, Japanese incurved, is rich deep yellow, and Duchess of Wellington is of the same type and colour. Col. W. B. Smith is well known; so, too, are Mme. Cambon, Mrs. E. G. Hill, and Col. Chase. Philadelphia is disappointing, the colour is far from the pure white which we saw last year when it was sent over from America. Queen of the Buffs, Lady Playfair, Mrs. Geo. J. Ils, Mrs. D. Airdrie, Pearl Beauty, and many others must be passed over owing to want of space.

Incurved varieties are well represented, D. B. Crane, a richly coloured, well-formed variety, being one of the newest. Chas. H. Curtis is large, pure yellow in colour, and has very sharply pointed florets. Baron Hirsch, fine in build, rich golden chestnut, is also good. Mme. Darrier, nankeen-yellow; Globe d'Or, golden yellow; and Mr. James Murray, bright rosy pink and new, are well represented. Other varieties, viz., Refulgens, Mme. F. Mistral, Brookleigh Gem, Jeanne d'Arc, J. Agate, Golden Empress of India prove that Mr. Jones takes an interest in the older known section, and does not confine his efforts to the more popular race of Japanese exclusively. There are some examples of hairy varieties, many of quite modern origin. Vaucanson, figured and described in The Garden last season, is the first to be observed. A new one called Perle d'Or, a clear shade of pale yellow, but rather thin in the petal, is only slightly hairy. Papa Bertin, also new, is peculiar in form, having long tubular florets, very curly at the tips, colour silvery pink. Hairy Wonder, reddish bronze, is well known, and a very fine bloom of the famous white Mrs. Alpheus Hardy, the forerunner of the section, is also well open. Prima Donna and King of the Hirsutes are not novelties of the year, but P. Marieton is. It is large and solid, a Japanese golden bronze, shaded yellow. Enfant des deux Mondes is best known as White Louis Boehmer, and the last of this race to be mentioned is Abbé Pierre Arthur.

Altogether the Ryecroft collection may be regarded this year as one of the best, and the task of going round the large house occupied the whole of the afternoon. Visitors during the next fortnight will see much more to interest them than can be indicated in an article like this, and the collection will well repay a visit even late in the month, unless the metropolitan and provincial shows make a heavy demand upon Mr. Jones' resources.

Chrysanthemum La Vierge.—Although this is a comparatively old variety, there are few, if any, of the newer kinds to beat it. The flowers are of the purest white, without the least tinge of pink, and are far superior to those of Mme. Desgrange in that respect. It is a midseason variety. I have at the present time some plants in 7-inch pots that are not more than 18 inches high, each one having three or four stems with large clusters of snow-white flowers on each. The reader will be able to judge how valuable such a variety is for all the purposes of ordinary decoration, as plants of the height I have mentioned can be obtained by once stopping the principal growth. —J. C. Clarke.

Chrysanthemum W. H. Lincoln Improved.—This fine yellow kind promises very well. It is of medium height, of vigorous habit, and is likely to become one of the most popular of market kinds for semi-early work. In the growing season, by reason of its free rooting, it requires much greater supplies of moisture than many and must be carefully noted in this respect. The flowers are of a good deep yellow and of the Japanese incurved type, the same as the seed parent. Like W. H. Lincoln, the improved kind is very free, giving fair-sized flowers on good stiff stems from the terminal buds. It is also a capital variety for crown buds. There is room for both kinds, as the type flowers somewhat later than the improved form.

New Chrysanthemums.—Not only is the attendance of bona-fide gardeners and amateur cultivators of the Chrysanthemum at the National Society's November exhibition without doubt the greatest of its kind in the kingdom, but the wish for anything new shows how deep is the interest taken in the new flowers, of which there are always so many. Some of the new varieties of last year have not proved to be very satisfactory, and it is not too much to ask that a little more care should be exercised in the ordering of novelties so that disappointments may be averted. One specially over-praised flower proved this season, though largely bloomed in the country, to have been almost worthless, and should of itself cause those who can often ill-afford large sums for novelties to exercise more patience ere they haste to buy. Another variety, for which the outrageous price of one guinea per plant was paid, is far less worthy of notice than are many sold at 2s. or 3s. each. It is a pity the National Society has not its own means of testing all novelties by good growth before giving certificates of merit. So far the best tests are to be found in the collections of our leading trade growers, who invariably grow all their plants so well, and where there is always the greatest facility for comparing new kinds with old ones. That there have been many remarkably fine flowers shown this year which are full of promise there can be no doubt, but were it the rule to grant certificates only when grown and shown two years in this country, possibly fewer certificates would be awarded, as it is most noticeable how many thus honoured fail to take a prominent position later. Nothing can be more unfortunate than that to satisfy pure trade exigencies the impress of a certificate of merit should be given to what is after all under wider cultivation a worthless variety.—A. D.

SOME LARGE JAPANESE CHRYSANTHEMUMS.

Whatever the demerits of size may be in a Chrysanthemum, one thing is certain—that the visitors do not disregard it. During the past few weeks I have met with several examples of recent introduction in which size is a leading feature, and may mention as the most notable in this respect—

Pride of Madford, a large Japanese incurved, of Australian origin, very globular in form and substantial. The florets are broad and deeply grooved, colour rich rosy amaranth, reverse silvery, streaked amaranth.

Australie is also from the same part of the world and of the same type, but the colour is more dull, a rosy amaranth, with a leaden-pink reverse. The florets are broad, pointed at the tips, and veined on the outer surface.

Australian Gold.—Although a French-raised variety (one of Calvat's), it is a curious coincidence that its name might possibly suggest a colonial origin. This is a pure Japanese of immense size, a very full double flower; florets rather narrow, colour rich canary-yellow, tinted lemon in the centre, reverse silvery yellow.

Mutual Friend.—An American variety, very large, the long florets being deeply grooved and curly; colour wax-like white.

Rè d'Italia.—One of Mr. Ironside's seedlings, a Japanese belonging to the spidery or octopus type. The florets are loosely arranged, of immense length, and, being tubular, do not show the inside colour, which is reddish chestnut except at the open tips. The reverse is straw yellow.

Edith Tabor.—Probably the most beautiful of the set. It is a pure Japanese, of very fine form, with long drooping florets, curly at the tips; colour clear canary-yellow, shaded lemon.

Chrysanth.

SHORT NOTES.—CHRYSANTHEMUMS.

Chrysanthemum Phœbus.—This handsome flower has no equal among early kinds at present, especially in point of colour. This is a deep shining gold, exceedingly rich, the florets drooping in the most graceful fashion. It comes into bloom at the end of October and, disbudded, makes a large handsome flower. It grows rather too tall.

Chrysanthemum Mrs. Charles Blick.—At a recent meeting of the R.H.S. at the Drill Hall a fine group of this grand white variety was exhibited. The plants, each from 2 feet to 2½ feet high, were in 6-inch pots and carried a single flower of large size and great purity. Such examples would no doubt prove valuable for decoration.

HARDWICKE GRANGE, SHREWSBURY.

Hardwicke—now the seat of Mr. J. J. Bibby—is a simple old English house, standing in the midst of a spacious park and gardens in some of the finest country that surrounds the ancient town of Shrewsbury. It was formerly the home of Lord Hill, of the Peninsular War fame. He, after the termination of that long campaign, settled down here and took an active interest in his garden, a number of the trees that now adorn the grounds having been planted under his direction. The situation of Hardwicke is rather flat, and its own well-wooded surroundings shut out most of the hilly scenery of the district; but this is no loss when one meets at every turn trees, shrubs and flowers of interest and beauty, maintaining a fresh, but changing, picture throughout the year of the best flowers of the time. This is the kind of garden that literally surrounds Hardwicke. The flowers are not all gathered together into one spot and set down in an imposing array, but one finds them everywhere growing in situations that they fittingly adorn and under suitable conditions.

The engraving we here give of Hardwicke shows its carriage front or park view. The



Hardwicke Grange, Shrewsbury. Engraved for The Garden *from a photograph by Mr. J. Laing, Shrewsbury.*

drive that leads up to it traverses a park that has many fine specimens of native trees and grand groups of the common Holly, certainly one of the noblest of evergreens, and when at its best unequalled by any exotic evergreen that will grow in this country. It is well cared for here, as in the spring previous to our visit some of the groups had been thinned by transplanting to make fresh groups elsewhere, and with prospects of success, judging from the appearance of the trees when we saw them. Just before reaching the house a little lake comes into the foreground, as shown in the picture—a future home for the new series of hardy Water Lilies—and the garden itself is entered. The luxuriant growth of Holly is again manifested by a splendid piece of a silver variegated variety, well shown in the picture, hiding a part of the house. On the left is a little garden devoted chiefly to summer flowers. At the time of our visit Antirrhinums were a bright feature here, fine, free, handsome self kinds, yellow, white, and crimson being massed in beds with other plants. Such forms as these are distinctly good, and much to be preferred to the pigmy strains that have been brought out of late years. On the opposite side of the house to the carriage front there is a fine expanse of lawn and a few good specimen conifers, such as Abies canadensis, A. cephalonica, and the Silver Fir. A tree of A. nobilis shows well the absurdity of grafting conifers. It is grafted on the Silver Fir, and, although an old plant and healthy, it is only 30 feet high and always makes a stunted, distorted growth. A very fine Beech tree with a large, clean bole and an enormous head of branches stands near. Among a group of Rhododendrons, Azaleas, and other flowering shrubs we recognised the lovely and hardy Arundinaria nitida, whose origin and name have only lately been cleared up. The plant in question was purchased under another name, and although Bamboos were hard hit by the frost at Hardwicke, this plant came out uninjured, and thus from another district we have proof of its exceeding hardiness, whilst it is second to none in gracefulness, and altogether unique in the pretty colour of its young canes. From this part of the garden a walk leading to other parts of the grounds is margined by a line of fine Cob Nut trees that were planted by the late Lord Hill. They are now of large size and stand upon the turf, whilst behind them is a border of hardy flowers, in which Pæonies are most prominent, whilst it was edged beautifully with a broad margin of Viola cornuta. On the opposite side of the path, and also with a grassy foreground, was one of the brightest flower borders at the time of our visit. It was planted with the Prairie Sunflower (Helianthus rigidus) and the white Japan Anemone, with Carnations in front, the number and great variety of these latter showing that these flowers are popular here and well grown also. The best flowers were past when we saw them, but we noted a few, and these some of the newest kinds, still good, especially Hayes' Scarlet, The Pasha, Mephisto, Mrs. Audrey Campbell, Ladas, Pride of the Garden, Duchess of Fife, and others. A number of French varieties, both selfs and fancies, were under trial, and in regard to these Mr. Taylor had much to say in praise of their fine constitution, as proved by their vigorous growth and long-lasting season of bloom. Here, as we have often seen before, it was possible at a glance to point out where a group of French varieties ceased and another of English kinds commenced, although the plantations were side by side under like conditions of soil and treatment. A pretty corner is found at the end of this walk where the soil has been formed into gentle natural mounds and planted with choice evergreen and flowering shrubs and hardy flowers, with Grass walks giving access to the respective groups. In a little wood, yet still quite near the house, is another delightful bit of gardening only as yet in its infancy, rich in promise of good things to follow, but even when we saw it not without features of beauty, different from any others in the place. Once a marl pit, it became afterwards a garden rubbish receptacle, but now Mr. Taylor has made it one of the beauty spots of the place and a home for much fine vegetation that other parts of the garden would not grow. A tiny stream of water winding through the bottom of this now picturesque hollow provides a congenial home for moisture-loving plants, and amongst those now thriving there are Iris Kæmpferi in great luxuriance, Royal and other hardy Ferns growing tall and spreading into graceful groups, Spiræa Aruncus rivalling the shrubby kinds in size and showy display, with S. palmata and its white form less in stature, but spreading and blooming, as does the Meadow Sweet in the rich hollows of our woods. Here, too, a goodly number of Bamboos had been fairly established, but last winter injured them very much, some of them being cut down quite to the ground line. A walk winds by an easy way along the undulating slopes of this old pit, and at every few yards shows a different blending of suitable plants, flowering shrubs and hardy flowers always the most prominent. Hardy Cyclamens we were pleased to see in abundant blossom.

In and about the kitchen garden quarters the best hardy flowers of every season were constantly seen. Good mixed borders that are gay nine months of the year, and borders or groups of special families that space will not permit of our doing justice to were seen and admired. Certainly from Snowdrop time till the last of the hardy Sunflowers fade, outdoor flowers are one of the chief charms of this old garden. In the vegetable quarters, too, there is abundant evidence of the same good cultivation, and fruit likewise is well grown. Peaches do well outside in the district and the wall devoted to them here is perfect. Under glass, too, are grown admirable Grapes, Peaches, Melons, Cucumbers and Tomatoes. Orchids, too, have a share of attention, and the little range devoted to them in its cool, intermediate and warm compartments is filled with a collection representative of all that is most beautiful and useful in these flowers. Carnations are in request the whole year round, and a well-constructed range of Mr. Taylor's own designing is devoted to these in winter. These houses have a central pathway with front staging and a three-tier staging at the back, every portion of the staging being within easy reach of the pathway of the house, so that the plants can be easily and quickly attended to. Chrysanthemums likewise are largely grown. The garden at Hardwicke is just the kind of garden one longs to see more often.

Eradicating weeds.—On large estates, and especially in wet seasons, weeds are a source of much annoyance to those responsible for keeping walks and drives in good condition. Hoeing and raking incur a deal of labour, and are after all very unsatisfactory. With so many patent liquid weed destroyers in the market, however, there need be no difficulty in keeping the walks clean, and that, too, at a nominal cost. On riding through the extensive deer park of a Norfolk nobleman and remarking how clean and bright the drives were, I was informed that one of the popular weed destroyers was applied in liquid form once in eighteen months, the result being that for that period not a weed was visible. The

use of these weed-killers is a great gain from a financial point of view, as a long distance of road can be traversed by a couple of men in a single day, and the many weeks which it once took to hoe and rake can be spent in something much more profitable. In small gardens and pleasure grounds salt answers very well, as if it is applied during settled weather, it generally does its work well. Still there is a certain amount of risk in using it.—J. C.

KITCHEN GARDEN.

LARGE CARROTS.

IT may be assumed that Carrots are exceptionally large this year. No doubt these considerable dimensions are largely due to the season, but they are also to some extent due to the practice of saving seed from large roots, so that size is in danger of becoming more and more developed. That may be thought a gain, and perhaps from the cattle feeding point of view is so. For our own tables, however, we have need of pleasant eating quality, soft texture, sweet and flavoured flesh, and these are elements in Carrots not usually associated with very large roots. How very much the New Intermediate type, the St. Valery of the French, has increased in size of late, so that roots now rival the Parsnip in stoutness and length. Surely it cannot be admitted that for ordinary consumption such sorts are desirable. In the collection of vegetables that Mr. Empson, of Ampthill, staged at the Drill Hall on the 29th ult. were wonderful specimens of various Carrots, and as handsome and bright as if modelled of wax, yet all their beauty could not condone their exceeding bigness. But with these was staged also a sample either of the Scarlet Champion or a variety much like it, the roots about 7 inches long and of corresponding diameter that were not merely perfect as edible Carrots, but as beautiful as the most exacting of judges could desire. These were ideal Carrots for ordinary consumption, large enough for anything, and should have been of soft delicious flesh when properly cooked. It is impossible to cook the large roots now so plentiful when whole. They have to be cut into several portions first, and then when boiled they are quite flavourless. Why should we for the sake of securing roots of these inordinate dimensions deprive ourselves of the pleasure to be derived from partaking of what is in small Carrots soft, succulent, pleasant flavoured food? Cannot this tendency to become unduly big be corrected by sowing seed less early? Do we not give the roots too long a season in the ground? What Carrots now that have been raised from spring sowings can compete in table quality with those yet young and obtained from a July sowing? Are we not in our craving after bigness, the product, no doubt, of exhibiting, in danger of dethroning the Carrot from its former popular position as an edible nutritious root? It is often pleaded that judges of vegetables should condemn this tendency to set up large roots. The common difficulty experienced is that let judges have ever so much fondness for high table quality on such occasions, yet where all the roots alike are large they have no option. We shall never get satisfactory judging of vegetables at shows until the dinner table standard is taken. It is, no doubt, fair to say that at exhibitions what is to be looked for is not table quality at all, but rather evidence of what respective products can evolve in both dimensions and beauty. That may be from one point of view good reasoning, but it can hardly have the same weight as the stronger argument, that as the primary reason why we grow vegetables is that they may make us the most acceptable and healthful form of food, so should these examples seen at exhibitions be estimated on the same principle. No doubt modern Carrots show a great advance on older varieties, but there is danger such advance may be discounted by the production of such needlessly large roots. A. D.

Snow's Winter Broccoli.—In THE GARDEN (p. 326) "W. S." spoke of the disappointment he had of late years experienced with this old-fashioned Broccoli, it having headed in most unsatisfactorily. I may say that my experience with it is much the same as his; indeed, on that account I have this year grown none of it. The last planting I made not only produced inferior heads, but these came at widely different periods, some appearing at mid-winter—its proper date—and others in spring. The fact is there has been such a universal demand for these good old strains of Broccoli and Cauliflower, that, as "W. S." says, they have degenerated. This is why I have given up growing Early London Cauliflower. If "W. S." has not yet tried Backhouse's Winter White, I would advise him to do so, as I find it a most reliable Broccoli for December cutting and of snowy whiteness and fine mild flavour. It is very distinct in habit of growth and resists a good amount of frost.—J. C.

The Carter Spinach.—Reference was made in THE GARDEN in the spring as to the value of this Spinach for early supplies, and also as to the size and substance of the leaves. It may be of interest to state that it is equally valuable for autumn supplies. Sown at the end of July with two other varieties under similar conditions, it far surpasses both in productiveness, size of leaf and crispness, a large basketful being picked daily from a small plot of ground. In the future I hope to grow considerably more of this variety, to the exclusion of others.—W. G. C.

Turnips Chirk Castle Black Stone and Orange Jelly.—I question if there are two better varieties of Turnips than the above for winter work, but the former is now seldom met with. Where Turnip-tops are required in the spring Chirk Castle is unrivalled, as it will pass through the most severe winter uninjured and provide a long succession of tender tops. Not only so, but occasionally the Turnips stored for winter use have kept badly, decaying or becoming woolly, and I have been obliged to fall back upon Chirk Castle standing outside; the small dark bulbs always find favour. Orange Jelly is a larger and handsomer Turnip, ranking next to Chirk Castle as a keeper, and of nice colour and good quality when cooked. I find this and other varieties keep fresh and plump much better if clamped the same as Potatoes, as they do not become so dry and flavourless as in the root sheds. To save labour the bulbs may be clamped on the ground on which they grew, putting a few bushels in a clamp, so that if the weather is sharp a whole heap can be removed into the root shed and consumed as required.—W. G. C.

Manuring Asparagus beds.—Opinions differ as to the value of manuring Asparagus beds which are in good bearing condition. I think manuring at this season in many cases does more harm than good, as a mass of manure causes many roots to decay, and those which do survive are weak and only throw up poor grass. I would much rather rely upon liberal supplies of food through the growing season than give manure at this date, as at that time the roots can more readily absorb the food given. By feeding from April to August the crowns are built up for the next season's supply of grass. The roots of Asparagus are always active, but much less so in winter than at any other season, and they obtain quite sufficient nutriment from the soil to support them. If heavily covered with manure, growth is checked, and the roots have to fight hard for existence when they are none too strong and are deeply buried. Again, the same objections hold good in the case of applying salt in the late autumn; it is equally as injurious as giving manures; indeed, more so, the soil being made wet and cold. I like to apply salt in showery weather from May to August, and at intervals. If such aids as fish manure can be given also, they cause a quick root action and the grass is of superior flavour. Fish manure alone is excellent for surface dressings. Guano also is a grand fertiliser, used as advised for fish manure. Salt given now causes late spring growth even on light soils, and, though at times advised, is the cause of beds failing. Of late, more Asparagus has been grown on the flat with a wider space between the plants. This is as it should be. The old plan of growing in beds, often in rows not more than 12 inches apart, was bad, the plants making a free top growth could not develop, and the result was poor crops. There is no loss by giving ample space, as a row of a low-growing crop can be put out between the plants. I do not like the raised bed system, especially on light land, as the beds are too much drained. With ample space—at least 3 feet between the rows (more is better) and plenty of space between the plants—there will be better results. Few vegetables give a better return than Asparagus if well supplied with liquid manure during growth. I would much rather rely upon liquid food than manure at this date.—G. W.

Saving Asparagus seed.—I do not think we pay sufficient attention to this matter, and by haphazard seed-saving get poor plants which never make good strong growth. I am aware there are several varieties of this vegetable, but so far, out of some six kinds sown purposely for trial, I can find but two varieties, and these do not differ much from older kinds. I am aware much of the difficulty in growing this vegetable is owing to the way in which it is cultivated. Careful seed selection, getting the seed from the best plants, is an important matter. It will be found that many of the seeds are produced on weak spray. The seeds should be secured from the best growths, not from crowded beds. Seeds obtained thus are more vigorous and need to be sown thinly.—S. H.

Late Savoys.—I do not think the above vegetable is so valuable as towards the close of the year. If sown and planted early and on warm borders, Savoys soon get coarse, having white hearts, which burst or split at the first severe frost. To get late Savoys, it is necessary to sow late, early in May being quite soon enough. I think early Savoys not worth cooking, as they are so strongly flavoured. It is surprising what severe weather these plants will endure if the heads are green and the plants close to the soil, in an open position for the first supplies, and for the latest on an east or north border. Of varieties we have large, medium and small. The large Drumhead is one of our most useful winter vegetables when grown late as advised.—G. WYTHES.

Renown Potato.—Will "J. C." kindly state which of the two round white varieties in cultivation under the name of Renown he refers to at page 343? One was put into commerce by Mr. R. Dean, Ealing, and the other by Messrs. Webb and Sons, Wordsley. Fortunately, it is rare that duplicate names are given to Potatoes, although so many new ones are from time to time put into commerce. I have grown both these varieties during the past season and found both very good. It has been an admirable feature of all round sorts that they have preserved their form so admirably, whilst long-tubered varieties have grown out and become most ungainly. For market sale the round kinds have given a long way the most profitable samples.—A. D.

Quality in Cabbage.—There is no difficulty in having good Cabbages from September well into March if suitable varieties are grown—small kinds and those noted for quality in preference to those of large size. One of the best Cabbages I

have grown for autumn cutting, when flavour is considered, is Little Gem, a very small green, compact grower, cone-shaped, and of delicious flavour. Favourite is somewhat similar, and though a trifle larger than Gem, is like it in quality and growth. Other good Cabbages for winter supplies—flavour being the principal point—are the St. John's Day and Christmas Drumhead. The older Winnigstadt is another valuable autumn Cabbage. I admit it is larger than the above varieties, but as regards quality it is one of the best of the larger sections, and valuable in late districts on cold heavy soils. The Rosette Colewort I have previously noted for early autumn supplies, and for use after Christmas the Hardy Green will not fail to give a full supply.—G. Wythes.

Quality in cooked Potatoes.—Very great allowance will have to be made for the somewhat indifferent quality found in many Potatoes, but especially in the long or kidney section, resulting from the new late growth made after the heavy rains in August. I find that whilst good rounds are alike throughout, and from sandy soil boiling admirably, the kidneys give flesh both fairly good and very soft or watery. That is the case with varieties that in ordinary seasons are excellent. Early Potatoes, where ripened off before the rains came, if not large are at least very good. Warmth is a most valuable agent in helping to create starch, or what we call mealiness in the tubers. There is much to be said also in relation to late-maturing varieties, that many of them become fit or ripe for eating only after having been stored several weeks.—A. D.

Carrot New Red Intermediate.—This new Carrot bids fair to oust such kinds as Altringham, Long Red Surrey and similar kinds, being more symmetrical and of a better colour. I do not care for large Carrots or those with great length of root, preferring those of an intermediate type. As far as quality is concerned there are none better than the stump-rooted section, but these are not always required. The above is a great advance on some of the older larger section, the roots being very solid and of excellent quality. This variety may be described as longer than James's Keeping, brighter in colour and of perfect shape. There is but little core and the root is very sweet. The roots keep well, are fuller at the top than those of many kinds, and have a rounded, neater appearance.—G. W.

Orchard and Fruit Garden.

GRAPES IN PLANT HOUSES.

It is often said that it is not possible to grow good Grapes in a house kept filled with plants during the whole of the year, while some even go further and maintain that pot plants ought to be kept out of vineries altogether. That pot plants are very much in the way at times there is no disputing, and most of us would prefer to have a clear course from the time the Vines are in flower till the fruit is cut. Nor must we overlook the importance attached to giving the Vines a thorough rest, exposure to frosts doing good rather than harm, but we cannot run the water out of the hot-water pipes and boiler if there are tender plants in a vinery, and there is in such cases no possibility of giving the Vines a rest, unless, indeed, we resort to the old, but almost obsolete plan of turning the Vine rods out on to the roofs. When, therefore, cases are met with that quite upset all preconceived notions, these are worthy of recording. That really first-class Grapes can be grown in a house kept constantly filled with a variety of pot plants I have had abundant proof during the past six years, but this season the record, so to speak, has been broken.



Grapes in a plant house. From a photograph by Miss M. Baily, Willow Vale, Frome.

In the gardens connected with Willow Vale, Frome, the residence of Mr. A. R. Baily, good Grapes are grown in the vinery proper and also in a Peach house, but the very best are cut from a Vine in a plant house kept as gay as possible all the year round. This compartment is approached through a small, but very pretty fernery, and at the other end is a plant stove. It is span-roofed, running from north to south on a steep bank, the floor being brought up to a level by means of extra high walls. The length is about 33 feet, width 12 feet, height of side walls and lights above ground-floor 6 feet, and the apex of roof 12 feet. There is a trellised pathway 3 feet wide, and on each side staging for pot plants. I give these details in order to show more plainly than does the accompanying reproduction from a photograph that it is not a great roomy house. Even the ventilation is not anything like what the expert Grape grower would expect to find, as there are only cap ventilators for the roof and not much side ventilation, the doorway leading out of the fernery being the most effective means of admitting fresh air in quantity. The border is inside and wholly above the ground-level. At the present time it is the full width of the house and about 9 feet in length. At first two Vines were planted, one Foster's Seedling and the other Muscat of Alexandria, each occupying a corner of the house. The latter variety was naturally most valued by Mr. Baily, and as it grew away strongly and promised to do well in other ways, he decided to gradually fill the house with it. A young cane was conducted from it under the pathway and layered into the fresh compost placed in the hole previously cleared of the soil occupied by the roots of Foster's Seedling. Along the lower part of each roof there is now trained a main rod, other rods being taken up the roof at intervals of about 4 feet.

If I remember rightly, the Vine has been planted not less than eight years, and at the present time only covers about three parts of the roof, so that the progress has not been rapid, but then the crops have been decidedly heavier than are usually left on Vines of Muscat of Alexandria. This season twenty-one large bunches were left, all furnished with perfectly set berries, the average weight being at least 2½ lbs. each. At Trowbridge the bunches cut from it and shown were considered good enough for a first prize, as well as a special prize offered for the most meritorious exhibit in the fruit tent, and first prizes were also gained during August, fresh bunches being cut each time, at the Frome and Bath shows. In November another first was gained at Weston-super-Mare, and two of the very best bunches on the Vine have been saved for the Bristol Chrysanthemum show. That will give some idea of the quality of the Grapes.

The Vine starts naturally in March, gets but little, if any, syringing, as this would be prejudicial to the flowering plants, and only a warm greenhouse temperature is maintained throughout. There is no neglecting to thin out the breaks, which, in common with those of most Muscat Vines, are never very strong at the outset, and no delay in stopping laterals, though these are left to a considerable length in places, reducing the number of bunches to about thirty and never omitting the important detail of smartly tapping the bunches which show when they are in flower. The best-set bunches, whether large or only medium in size, are rightly selected, and every season it

has been found necessary to remove several extra large bunches imperfectly set. The thinning out of berries is done piecemeal and with good judgment; the greater portion saved have a good complement of stones, and attain a large size accordingly. In such a house and under such conditions it would not be surprising to find red spider prevalent, but neither this nor any other insects are allowed to gain a foothold, the sponge and soapy water proving the best remedy when applied in time. The border has been formed piecemeal, and to the latest addition of good brown fibrous loam, mortar rubbish, and half-inch bones may be attributed some of the success achieved this season. Nor must I omit mentioning that both Mr. Baily and his gardener, Mr. Carpenter, believe that Grape Vines rooting in inside borders should have abundance of water during the growing season, and the Vine under notice has plenty of water and liquid manure.

During the summer I have seen a Stephanotis flowering freely in one corner of the house, a Bougainvillea in the other flowering grandly, and a good crop of Tomatoes on the rest of the roof between them and the Vine. Underneath, all through the summer, there are invariably some Orchids in flower, as well as Begonias, zonal Pelargoniums, Roses, and Carnations, with Caladiums, Coleuses, Cyperuses, Grasses, and Ferns. Just now there are two fine pieces of Cattleya labiata in flower, and the usual assortment of late autumn and winter-flowering plants. As will have been gathered from the foregoing, the temperature maintained is that which suits warm greenhouse plants, a little fire-heat serving to keep up the requisite circulation of warm, dry air—this also suiting most greenhouse plants when in flower.

W. I.

Pears on north walls.—It is not generally known that such varieties as Pitmaston will succeed on a north wall, and will thus give a succession when the fruit in the open is past. The flavour will also equal that of Pears grown under more favourable conditions. There are others equally prolific on the aspect named, and well worth a trial. Of course I do not advise extensive planting of Pears on north walls, my note being to advocate a longer succession of fruits of kinds which make a good show at a season the large fruits are on the wane. Souvenir du Congrès does well on a north wall in a well-drained border on the Pear stock. Marie Benoist this season is excellent as regards size and crop on the aspect named, and in 1893 and 1894 was of first-rate flavour. When grown thus and the fruits left to hang as late as possible, the season is much prolonged. The well-known Styrian or Keele Hall Beurré does well on a north wall, but as regards quality, it can only be termed second-rate. Grown thus I think the quality is better, and it keeps well into October. Emile d'Heyst also does well, and is of a delicious flavour and most prolific. Dr. Jules Guyot, a large, early variety, also does well. Mme. Treyve is likewise a good north wall variety. There are others equally good, but in planting, the soil and locality must be considered. In less favoured districts an east wall may be utilised in the place of a northern aspect. It often happens we have a wide selection of fruits for the best walls, but in certain districts a north wall may be made more useful than merely for growing Morello Cherries.—G. Wythes.

Apple Bramley's Seedling.—I think soil must make a great difference in the early cropping of various kinds of Apples. On our light gravelly soil many kinds are most precocious, and varieties which should come in in January are ripe two months earlier. I do not think Bramley's Seedling later in fruiting as regards young trees than other varieties, and when penning my note (p. 255) I did not enter into the conditions under which the trees were growing. I was induced to send the note approving of this comparatively new variety from the quantity of fruit gathered from young trees planted in November, 1893. Perhaps "E. M.'s" trees are in heavier soil. Mine are bushes on the Paradise stock and very prolific. I fully agree with "E. M." (p. 303) that standards fruit early and well, and I should say this variety will not need severe pruning in a young state. My young trees were allowed to grow freely. Not having had scarcely any pruning may account for their being more prolific. I find it much better to lift certain varieties about every three years at this season. In the case of small trees requiring to be restricted in growth, this lifting saves hard pruning.—G. W.

The heaviest Apples.—While I am no great advocate for monstrous productions in either fruit or flower, I cannot go so far as Mr. James Groom at p. 312 in thinking that large fruit "does positive harm." Some of our grandest Apples produce fruits of great size, and varieties that we cannot afford to be without. Take, for example, Peasgood's Nonsuch, Jubilee, Bismarck, and Blenheim Orange. Of the first, Mr. Will Tayler, of Hampton, had a fruit at the Crystal Palace recently that weighed exactly 22 ozs. when freshly gathered; Jubilee, 17 ozs. Some magnificent coloured samples of Blenheim Orange readily sold for 1s. per fruit, and that to a leading fruiterer who regarded them as the finest examples of Blenheim he had ever seen. These fruits were remarkable for size and weight, and, not least, their brilliant colour. The same remark applies to many of the varieties grown by Mr. Tayler. The trees producing these grand fruits have had no special treatment; in fact, they form part of Mr. Tayler's nursery stock, and were taken from bush trees not more than 4 feet high on the Paradise stock.—E. J.

Pear Flemish Beauty.—This Pear is not often met with. Nevertheless, it is one of the handsomest, and when well ripened of good flavour. If grown in a cold clay soil or the roots allowed to descend so as to lose the influence of warmth and air, the fruit is very liable to eat gritty, but when rooting in a medium loam well drained, Flemish Beauty is no mean substitute for Marie Louise. When in a young state it is prone to make strong wood and few fruiting spurs, and for this reason needs root-pruning every second year until checked by a good crop of fruit. I have this Pear in espalier form, and this season the crop is heavy, the fruit very handsome, having a russet skin with a crimson flushed cheek next the sun. One important point in the management of Flemish Beauty is always to allow the fruit to remain on the tree as late as possible to prevent shrivelling. In some gardens it is much addicted to dropping its fruit in early autumn, but I have proved that the above treatmen will in time stop this.—J. C.

Canker in Apple trees.—"S. W. F.'s" note respecting canker appearing on trees of Blenheim Orange Apples worked on the Paradise stock, whilst trees on the Crab stock are free from the affection, is very interesting, as serving yet further to show, whilst so ready to rush hastily to conclusions. how little we know as to the actual causes of canker. The Blenheim is invariably very strong and healthy on the Crab—is, indeed, one of the healthiest. There is nothing at all singular in its being so healthy with "S. W. F." on that stock. But why should it not be so on the Paradise stock? Why, again, are varieties, such as the Ribston Pippin and Wellington, notably so much cankered on the Crab stock usually so free from this complaint on the Paradise stock? Certain writers ascribe the canker to a fungus. With these it is always a fungus; indeed, with them all the ills from which vegetation suffers is put down to fungus. But those who hold that canker is but a symptom of poorness of blood, that is, lack of essential food constituents, are much nearer the mark, the obvious deduction in the very diverse cases referred to being this: that whilst the coarse-growing Blenheim Pippin finds what it needs only through the agency of strong-growing and deep-running roots, the Paradise stock also to some extent checking or choking natural habit of growth, the Ribston Pippin and the Wellington prefer obverse conditions, doing best under restriction and finding needful plant food nearer the surface of the soil. That fungoid appearances should manifest themselves after the eruptions in the bark caused by canker have developed is natural enough; similar growth in the form of gangrene may always be found on uncared-for animal wounds. "S. W. F." has a capital opportunity now to test the value of special dressings to his Paradise-worked Blenheim trees, using potash and superphosphate chiefly and moderately, and in that way see how far lack of essential food elements may be the cause of the canker, or whether it may be due to strangling because of the restrictive nature of the stock. The subject requires much careful consideration and experiment.—A. D.

FLAVOUR IN PEARS.

Like "W. G. C." (p. 331), I have made notes on the flavour of Pears. There is no other kind of fruit perhaps which varies so much or is influenced more by growth or diverse soils, peculiarities of season, or by general climatic influences as caused by district or elevation. A cold clay soil is about the worst possible for Pears. There may be size in the fruit, and this also produced plentifully, but unless in the very warmest seasons the midwinter and later Pears will not ripen well. This season I am looking forward to this class of Pear being melting, fine-grained, and of good flavour, thanks to the prolonged and fine autumnal weather, and this from a soil not by any means favourable for high quality Pears in the ordinary run of seasons. I never had Beurré d'Amanlis better than this season even when living in a more favourable district for Pear culture. The soil in this garden differs from that of the district which "W. G. C." hails from, which probably makes the difference. But, irrespective of this, my belief is that many people leave this Pear on the tree too long before gathering. If the fruits are allowed to hang until they part readily from the tree the flavour will never be good; in fact, they will be coarse and flavourless and decay early in the centre. Grown as a bush in the open and gathered before the stage just noted is reached the flavour will be good. Doyenné Boussoch I gathered exceptionally early in the season. Gathered thus, it was fine-grained and very juicy, the flavour being excellent. Not that I am particularly impressed with this Pear, as it is quickly past its best, and requires very close watching. If allowed to hang until the fruits drop into the hand, as it were, the flesh is mealy and decays rapidly. It is a great pity that this otherwise fine Pear should have this trait, as it is a healthy grower and free bearer, the fruits also being extremely handsome. Even when gathered at the right time, it is melting to-day and off to-morrow. Louise Bonne of Jersey must also be gathered early. Then we are certain of getting this fine October Pear in good condition, otherwise, although the fruits may be of large size and fine colour, they never become juicy and highly flavoured. I remember some years ago having a very fine tree under my care trained to a wall, and which used to bear most profusely. At that time I thought that no Pear should be gathered until when gently raised the fruits parted readily from the tree. When so gathered they never became juicy and highly flavoured, but when a change was made in the time of gathering the quality altered. It is astonishing the length of time even Marie Louise will hang on the trees. Often Pears are left hanging so as to eke out the supply, but if left too long it is at the expense of quality. Our latest Pears, which require a long and fine season to develop their high qualities, and which do not ripen until a couple or three months after gathering, must be allowed to hang as long as possible. The true flavour of these

Pears should be developed this season, and this on the more unfavourable Pear soils and district. The assistance of a warm room may be necessary to finish off the ripening satisfactorily.—Y. A. H.

—— The notes on Pears that have lately appeared would seem to indicate that there is even a greater difference than usual to be found in many given varieties from different soils and situations. Thus, one writer recommends Beurré Diel as about the best Pear of its season, whilst another condemns it as worthless; and marvellous samples of Duchesse d'Angoulême, very fair in flavour, come from one place, and at another trees on all aspects and of every form fail to produce a single fruit fit for dessert. Occasionally a good word is said for Marie Louise d'Uccle, but as a rule it is a very disappointing Pear; size, colour and aroma are alike good, but the flesh is uneatable. I remember being rather sharply criticised some years ago for advocating the claims of Van Mons Leclerc as a successor to Marie Louise and others of a like season, and am therefore glad to see Mr. Prinsep in a recent number writing very favourably of it. It has only failed with me one season out of fourteen, and that was in 1894, when every fruit went soft and decay set in without any sign of ripening. One cannot of course claim a first-class place for it in point of flavour, but it is very fair in that respect and a great and consistent cropper. Our two best Pears have again been Doyenné du Comice and Beurré Superfin, and we are not likely to have anything better. Possibly the next best from a flavour standpoint are Marie Louise, Thompson's and Winter Nelis, and a contemporary of the latter in ripening—Zephirin Gregoire—is very fair. Beurré Diel is never fit for table, but Glou Morceau does well and is a useful December Pear. Beurré Bachelier has been much better than usual, and Beurré Hardy, extra good, not far behind B. Superfin. A very handsome November Pear, comparatively rare, is Duc de Nemours; it is a great cropper and of very fair quality. A correspondent recently had a good word for Aston Town. This I have not seen for years, but remember some standard trees in an old kitchen garden that produced first-class fruit, not large, but firm, very sweet and juicy and of very pleasant flavour.—E. Burrell, *Claremont.*

HARDY FRUITS IN 1895.

In taking a survey of the fruit crops for the past season, it must be admitted that it has been one of the most abundant on record, and this, too, after such a severe winter. We are very apt to complain and look on the dark side of things, and certainly in the early part of the season there appeared just cause for complaint, particularly in this district. On the whole, however, the summer has been a good one, and now that the crops are gathered in we are better able to take stock. From north to south we hear of fruit being sold at such a low rate, even the finest samples, as to scarcely pay for the trouble of gathering. I may here give an instance or two showing how useless it is to try and sell poor fruit even at a low figure in a season like the present, when good samples are plentiful. I will first take the Apples. Those who grew the earliest kinds, thinned the fruit, and sent it to market early made fair prices of it. A friend of mine in this neighbourhood who grows Ecklinville, Lord Suffield, and Stirling Castle gathered some of his fruit long before they had attained anything like full size, and sent them to market. For these he was returned 4s. 6d. per bushel. By thus relieving the trees of a portion of the crop, the fruit left grew much faster. The next lot sent up only fetched 2s. 6d., while in the course of a fortnight after, the prices were reduced to 1s. 3d. From this it is evident that the consumer, not the grower, reaped the benefit of the big crop. Seeing that prices in Glasgow were quoted at from 6s. to 8s. per bushel, he thought to try that market, and so forwarded a ton packed in barrels. After a short time he got back 9d. per bushel as his portion after carriage and commission were paid, thus showing that Apples must have been very plentiful even in the north. It would appear from this that Apple growing in a season like the present is a complete failure, and so it would be unless better care were taken to select the right varieties and put them on the market at the proper time. To pack early soft kinds that are ripe into barrels and send them a long distance is certainly a mistake, as they are sure to be rolled about when transhipped. Many Apples have been sold in this district during the autumn for about 6d. per bushel, but they were small, inferior samples only fit to grind down to make cider. Those who are about to plant this autumn with a view of growing for market would do well first to consider which varieties are most suitable for that purpose, whether they are able to get them forward enough so that they may be put on the market early, or grow the later kinds that will travel some distance without being bruised. We have seen that the early Apples commanded the best price, while the midseason kinds were not worth gathering. Unless long-keeping kinds are grown, it would be well for growers to confine themselves to large, early and free-bearing kinds. Those named above are all good, and to these might be added Pott's Seedling, Frogmore Prolific and Loddington, all of which are first-rate. There are of course others, but it is not well to grow too many sorts where bulk only is needed. If I were asked which was the best Apple to succeed these, I should have no hesitation in saying Lane's Prince Albert. This is certainly a poor man's variety, being a good grower, of hardy constitution, and a sure cropper. Nor is this all, for the fruit grows to a good size, keeps well, and is a splendid cooker. Midseason kinds—that is, those that are in use during October, unless they have some special merit to recommend them, such as colour and size, are not worth growing. Long-keeping kinds will always command a price even when the American Apples are plentiful. Cox's Orange Pippin, Northern Greening, Royal Russet, Wellington, Brownlees' Russet and others that keep sound till March or April, particularly when well grown and of good quality, are sure to sell well, and as most of these are prolific bearers, they should be planted in preference to such as come into use during October and November. Nurserymen as a rule grow those varieties for which there is the greatest demand, and those who grow for the trade only confine themselves to a few kinds which meet with ready sale. Any who are desirous of planting with a view to growing for market should bear this in mind, and first ascertain what varieties do best in the district. Some Apples may look well in shop windows or in the market that would be useless to the grower from a commercial point of view, they being such shy bearers. As a rule nurserymen fruit but few trees, their object being to grow the plants for others to fruit, though some, as gardeners know, grow trees large enough to produce a crop. Especially is this so with the leading retail firms. It would be well, therefore, if intending purchasers would visit these in the autumn, and not only see the fruit growing, but the habit of the trees, size of fruit, and any other peculiarities there may be concerning them. Turning from the Apple, I will next take the Plum as being the most serviceable on account of the numerous uses it may be put to. Pears no doubt would be preferred by some, while others would have a fancy for Peaches. Each and every fruit is useful in its way, but those demanding our attention most should be such as are of the greatest benefit to the public at large, as they are of the greater commercial value. Those of us who have only seen fruit as grown in private gardens can have no idea of the extent it is grown for market, but for once the supply has far exceeded the demand to be of any real profit to the grower. It seems strange that Damsons should be offered in the markets in the midlands for far less money than they could be gathered, and yet people would not buy simply because they did not know how to preserve them cheaply. No better plan could be adopted than cooking them in their own juice in jars and sealing them down while hot. Yet how few poor people know of this, and allow a fruitful season like the present to pass by without taking advantage of it. Were our home-grown fruits husbanded in the best possible manner when we have good crops this would do more to shut out foreign competition than all the laws on protection that could be made. That our climate is suitable to the growth of such fruits all must admit, yet when we have a plentiful season fruit goes begging, while thousands of people scarcely ever taste it. Some years ago French Beans were a great rarity in the winter; now in this district they are almost as common with the poor people at Christmas as they are at the end of August, and this simply because they understand the art of preserving them in brine. Black Currants were the most abundant crop in this district I ever saw, and they realised a fair price simply because so many are used for jam; and the same may be said of all bush fruits. Pears, not being in such demand as Apples, are of course not so much grown, but the wonder to me is that more baking or stewing varieties are not cultivated, seeing that they are far hardier than the others and remain in condition for such a length of time. Catillac this season is very fine, and will no doubt be very serviceable for some months yet.

We may therefore congratulate ourselves on not only having had plentiful crops of soft fruit that has either been used or preserved, but that our store-houses are well furnished for the winter and will give us a supply till far on in the spring. H. C. P.

Apple Warner's King.—I notice some catalogues give the season of this Apple as from October till February. Will any correspondent, who has had it some time after Christmas, kindly say what are the conditions of growth conducive to such keeping? Mine are nearly always all gone by the beginning of October, and the few that remain over soon spot badly and are comparatively worthless. It is matter for regret that there are so many Apples of about the same season, and, as a rule, such sorts as Lane's Prince Albert, Blenheim and Wellington might be used more extensively in new planting, to the exclusion of so many soft kinds that are useless after, say, the middle of October. Of the midseason sorts, the best keeper with me is Yorkshire Greening; it is also a splendid cropper on young trees, and, despite its somewhat unprepossessing appearance, is a splendid cooking Apple.—E. Burrell, *Claremont.*

Morello Cherries as bushes.—The Morello grown as a bush with a short stem, and kept to a certain size, is valuable, as the fruit hangs well and is less subject to the attack of birds than the sweeter kinds. Not only is the Morello good in this way, but the Kentish Red is equally good and one of the best for tarts or cooking. The value of the Kentish Cherry is its long-lasting properties, as if the trees are broken in any way they soon make new growth. Both the Morello and Kentish

Red should be grown on the Mahaleb stock, as they are more prolific and bear finer fruit of better quality. Though these varieties do well in standard form, they are not so easily managed, the pruning is more difficult, and the roots, which should be near the surface, cannot be so well looked after. The trees, when dwarf, require to be kept well thinned or pinched in the head during growth, as many of the best fruits will then be borne on spurs, and by free admission of light and air there will be better fruit. On trees with compact heads the fruit can be protected. It also colours better and the trees present a neater appearance. The Wye, or old type of Morello, does well when grown in the open, but I do not care for it, as the fruits are small and very late.—G. Wythes.

PRUNING ILLUSTRATED.

To the Editor of The Garden.

Sir,—I have a suggestion to make which, if carried into effect, will, I believe, prove fruitful in more senses than one—it will give an opportunity for those who have a liking for photography to engage upon a work of great interest, and a profitable one to boot. The idea is to produce a series of photographs with the object of showing in a graphic manner the art of fruit tree pruning, an art that needs cultivation, as may readily be proved by a passing glance in any district throughout Great Britain where fruit trees have been planted. It is the exception to find that after having been put in the ground they have received proper treatment and attention, and, from cause to effect, a very large proportion of the fruit we see is of inferior size and quality and the majority of the trees and bushes are "rank wild," yielding immature fruit and harbouring disease in some form or other—doing more harm than good.

If a series of illustrations from photographs, showing how trees are properly pruned, were published from time to time in The Garden, with descriptive notes by a competent gardener, they would provide a much-felt want, and if produced afterwards in, say, an annual volume, a work would be issued that would find a large sale not only in England, but in the colonies where fruit-growing is now so extensively carried on, and where the want is greater still of a work that will show more plainly and clearly than words can possibly do how to prune. The work may be undertaken at once. The camera should be guided and directed by one capable of selecting suitable specimens for the purpose. If not an expert in both arts, the owner of the camera may obtain the assistance of a gardener who would take a joint interest in the object to be attained. Trees and bushes would have to be shown in all stages and conditions of growth. Views taken now would present them with the summer growth after the crop; this would come out best when some of the foliage has been shed. The next of the series of the views would be the same trees and bushes after pruning, then another series with bud and blossom on, and yet another to display the effect of proper cultivation—the crop. To contrast with good cultivation I would have views also of badly pruned, over-pruned or neglected specimens. There is nothing so convincing as a good object lesson. Whilst in Australia I implored one of my friends to prune his trees. He was showing me with great pride his Peach trees towering high above his roof. The fruit, few and far between, was very small, but not until he stood by one of my trees loaded with fine fruit, the branches propped up, and every Peach within arm's length from the ground, would he heed what I said. He then admitted not one of his great trees three or four times as big had half the quantity of fruit on, or anything like the quality. "There must be something in what you say," was his comment. There are many who need convincing of the necessity for pruning, and many more who would prune if only they knew how to do it. I have sketched out a series of views extending over a year, but the work should not stop there; it should show the progress, both good and bad, over three or four years, or even longer, made by the same trees and bushes.

In addition to the picture of the whole tree, there should be details; for instance, a portion of a branch, before pruning and after, large enough for the buds to be distinctly seen, and shoots to be nipped back may be shown by a branch that has not been nipped and after it has been nipped. Summer and winter pruning will then be dealt with, the after shoots following summer pruning that have to be cut out. Cuttings should also be shown at a size large enough to display the features to be attended to; the cutting as taken off, and with the buds cut out and shortened ready to place in the ground. Then there are underground operations to be performed in root-pruning. Many who have their doubts about the proper way in which to prune the branches have absolute fear about touching the roots; those fears are to be allayed by being shown first how the roots appear when exposed to the view, and then how they have been brought into subjection by the knife. The work may be commenced at any season of the year. If confined to the most common varieties only, Apples, Pears, Plums, Cherries, Gooseberries, Currants and Strawberries, the work would be most interesting and valuable; it may, however, be carried much further. The views should be clear and well defined, and in most cases some object should be introduced—a figure, a spade, a wheelbarrow, anything to convey an idea of proportion. Cuttings shown in a hand holding a knife would need no description as to thickness or length. I have photographs of enormous trees, but no one could judge of their size from the photograph because there is no object taken with them by which the proportion can be judged. In the case of trees the age should be stated, approximately if not exactly, and in all cases the time of year when the view is taken should be named and the district. There is a considerable difference in the season of the year between the sunny south and the far north of England.

The suggestion may be put into practical shape and carried into effect on the lines of a competition; selections to be made for reproduction from views contributed by those who may enter into the spirit of the competition.

Wetherby, Yorks. C. R. Fenwick.

VERY LATE PEACHES ON WALLS.

Late Peaches are not always so good as they have been this season. At the end of October I gathered fruits of Golden Eagle, and the flavour, if the season be taken into account, was not at all bad. It may be said, why advise the culture of the very late varieties in our variable climate? There is a demand for late Peaches, and good prices are obtained. "Y. A. H" at p. 312 says that he obtained 18s. per dozen for Sea Eagle, but if they fetched half that price it would be worth while to risk a season or two and plant late Peaches. I am not concerned about market prices, and cannot write on this point like "Y. A. H." or "W. G. C." My remarks as a grower of these fruits for private use may not be out of place. I find these very late Peaches most serviceable, and anyone who has a large and varied dessert to supply will also find them useful. The flavour cannot be compared to that of August fruit, but appearance goes a long way. Such kinds as Princess of Wales, Golden Eagle, and Walburton Admirable are not badly flavoured, and even in the most unfavourable seasons the trees can be given special attention by placing lights or sashes against the trees or sheltering them at night with mats or canvas to throw off moisture and early frosts. Late Peaches, such as Salway, need more than ordinary care. I do not advise it for open walls, as it is not reliable. In a cool house or case it deserves a place, and I can with confidence recommend it for very late dishes; indeed, I have seen this variety if carefully wrapped in tissue paper keep till Christmas when grown on a wall with a glass coping in the southern parts of the country. Lord Palmerston is one of the very late varieties, but I do not advise it for open walls. It is a very large fruit, but of poor quality and not reliable for general cultivation. Barrington grown on an east wall in a warm soil is preferable; indeed, this variety may be had well into October grown thus if planted in suitable soil. The same remarks apply to Bellegarde or French Galande, and it rarely fails in the worst autumns. Given a favourable season, Walburton Admirable is one of the best of the late section. I have had it very good this season, also in 1893, on a west wall. It should be stated that the soil is very light and the garden sheltered. In localities where the very late kinds are not reliable, such kinds as Bellegarde, Barrington, and Sea Eagle will give a good return. In a northern exposed garden I recently saw very fine crops of late Peaches, the trees growing in raised borders. Most of the trees were standards with 5-feet stems, dwarf dessert Cherries being planted between. The only objection to the Cherries was their liability to attacks of black and green-fly and the difficulty of keeping the trees clean. There are other kinds besides those named, but they lack flavour, though prolific. The half-dozen named will, when grown well, be found valuable. G. W. S.

SHORT NOTES.—FRUIT.

Apple Domino.—This is a free-growing, useful early kind. I consider it superior to Ecklinville and several others of this type. In this garden, where Lord Suffield is not satisfactory, Domino is a success. Recently I observed some young trees in a nursery at Downham Market loaded with large handsome fruit. With me it keeps till November.—J. Crook, *Forde Abbey.*

Cleaning Vines.—What is the best mixture to paint over the rods of Vines after they have been washed with soapy water? Gishurst compound I cannot get here. I use a mixture of sulphur, nicotine and strong soapy water. Is there any objection against it?—R. Katzer.

*** The mixture you use is suitable. If you add a little clay to make it stick to the rods it will be all the better.—Ed.

Spot on Figs.—I have a Fig tree (sort unknown) planted against a wall in the Apricot house, in which forcing begins about the end of January. Every year the tree is covered with fruit, which grows up very quickly till a brown spot makes its appearance upon it. The Figs cease growing and soon afterwards they drop; this has happened two years in succession. The tree is healthy and is not syringed. Could any reader of The Garden tell me what the disease is?—R. Katzer.

Garden Flora.

PLATE 1040.

CATTLEYA HARRISONIÆ.

(with a coloured plate.*)

Although one of the oldest Cattleyas in cultivation, a glance at the accompanying plate is sufficient to show that it still merits attention on account of its beauty. Its free-blooming propensities and the ease with which it may be grown are additional recommendations, so that, taken all round, it may be styled one of the most generally useful in the genus. The pseudo-bulbs on strong plants attain a height of about 20 inches, and each bears at the top a pair of light green leaves very thick and leathery in texture. The flower-spike issues from between these at the time the plant is finishing its growth. Being rather erratic in this latter proceeding, no special time can be named as its flowering season, for often before one spike is over, the eyes at the base start

* Drawn for The Garden by H. G. Moon in Mr. Sander's nursery. Lithographed and printed by Messrs. Joseph Mansell, Limited.



CATTLEYA HARRISONIÆ.

afresh, another pseudo-bulb is made, and this generally throws a spike in accordance with its strength. A good deal of water is required by this Cattleya all through the season, and it is often kept too dry at the roots during winter. The compost should on this account be free and open, good fibrous peat broken in lumps as large as a pigeon's egg, with most of the earthy portions sifted out, forming the chief ingredient, the rest being made up of chopped Sphagnum and rough potsherds or ballast. The pots must be filled to about three parts of their depth with crocks, a couple of inches of compost sufficing for the largest plants. In this open, well-aërated medium the roots run freely, and are consequently healthy and long-lived. In potting, the leads must be kept as far as possible from the edges of the pots, it being sometimes advisable to notch the rhizomes in order to bend the leading growths back towards the centre, for no Orchid gets bare more quickly than C. Harrisoniæ. All the old peat should be picked or washed out from among the bulbs, and any roots that are seen to be decayed cut away to make room for the new ones. This will prevent the hard mass of roots and old compost collecting together, making it difficult to water the plants without getting them soddened. The Cattleya house or intermediate temperature suits this species well, allowing it to have its own way in the matter of resting and growing, encouraging it when the growths are moving, and keeping it as cool and quiet as possible at other times. No watering overhead is necessary, in fact it is dangerous, especially when the new growths are about half finished and the young leaves form a kind of cup, wherein the water is apt to lodge.

Newly-imported plants of this Cattleya are often badly infested with a soft white scale, and this must be removed at once, or the probability is they will never be clean. The insects are usually very thick about the rhizomes and under the scaly sheaths of the bulbs, and the work of cleaning must be very carefully done, using a stiff brush or a pointed stick to dislodge them from the hard, woody parts, and carefully sponging the leaves with tepid soapy water. The blossoms of the typical C. Harrisoniæ vary considerably in size and the number produced on the spike. They are usually about 4 inches across, the sepals and petals being soft purplish rose, the lip lighter in ground colour and stained with yellow. The segments, being well thrown back, show off the blossoms to the best advantage, and these last from three to four weeks in good condition. It is a native of Brazil, introduced about 1835.

C. H. superba is a large and well-formed variety of the type, the sepals rather narrower, but very rich in colour, the lip pure white in ground colour with a ridge of yellow.

C. H. violacea is a deeper coloured form, the segments all being bright rosy purple, the lip margined with white. Other varieties are candida, with white flowers; Regneriana, deep purple; and maculata, which has the segments spotted with bright purple. H. R.

Flower gardens in winter.—Flower gardens in winter, as a rule, present anything but an attractive appearance; this is the more unfortunate, as the owners of them usually reside at their country seats the greater part of the winter. Much might be done, however, to brighten and adorn the beds from October to May by planting ornamental shrubs and conifers in small, shapely specimens. At a small private place near here the flower garden is always worth a visit, even in the most wintry weather, some of the most conspicuous plants employed being gold and silver conifers, tree Ivies, variegated Box, Cryptomeria elegans, the various forms of Euonymus, Golden Hollies in quite a small state, and Aucubas. A little care in the arrangement gives a very pleasing effect, as the shrubs present a great variety of colour and are quite charming viewed from the sitting-room windows on a sunny day. In April it is necessary to remove them to a cool border or home nursery, and propagation must be practised every few years to keep the plants dwarf.—J. C.

The Week's Work.

HARDY FRUITS.

Peaches and Nectarines.—This being the most important month to the fruit grower as regards hardy fruit selecting, planting, and filling up spaces occupied by old, worn-out trees or useless varieties, no time should be lost in making an early start, so that good material may be secured and the trees placed in their growing quarters as early in the season as possible. Peaches and Nectarines are the first that require attention, as few fruits give a better return if given ample attention and grown on a favourable aspect. During the last few years we have had specially favourable summers, also good autumns for ripening the wood. This doubtless will have caused more interest to be taken in these trees. They have this year made a later growth than usual, but owing to there being no late spring frosts the growth is better matured, and planting need not be delayed. I never saw trees look better, the wood being firm and not coarse, as one sees in wet seasons. I noted the value of early planting, also the materials required to secure the best results, at p. 341, so I will now only add a few words as to position and variety. Peaches in the most favoured parts of the country do well on a west or south-west aspect, while in others a wall full south is necessary. Here I get the best fruits from a south-west wall, and by having trees on a west aspect in such years as we have had recently, the season is prolonged—an important point where a long supply is desired. I will name a dozen varieties suitable for early, midseason, and late fruiting. *Early:* Alexander, Amsden June, Hale's Early, and Condor. *Midseason:* Dymond, Grosse Mignonne, Royal George (on warm walls), Noblesse, and Crimson Galande. *Late:* Barrington, Princess of Wales, and Walburton Admirable. This is a select list, but it is reliable. I admit Royal George mildews badly at times in wet seasons, but it is too good to omit. The following Nectarines are reliable: Rivers' Early, Advance, Lord Napier, Humboldt, and Pine-apple. Newton is also good for late dishes.

Apricots.—These trees to do well require similar attention to Peaches and Nectarines; indeed, I think more so, as I find by early planting before the leaves fall better results are secured. Of course, it is impossible to get trees in full leaf from the nurseries. Of late years the trees when sent are none too large, but to a certain extent this is not the grower's fault, as the young growths are so often cut down by May frosts. The spring of 1894 was the most disastrous, as the young growths were so injured that the trees in some cases were lost. This year it is the reverse; growth is all one can desire. As most growers of these trees know, the Apricot suffers much from drought during the growing season, and this points to the necessity of early planting, these trees being the first to start in the spring. As regards soil and position, much the same remarks apply as to Peaches, but though the trees will in a sense stand flooding weekly during growth, they require efficient drainage, and in heavy clay soil should have a liberal addition of lighter material with ample drainage, or, what is better in gardens where Apricots fail, a raised border. To plant as advised when in leaf I have found it advantageous to purchase one season and grow on a low wall or even between larger trees, replanting in the permanent quarters the next. In this way the trees can be lifted early and will do grandly the next season. As regards quality, Moorpark must have the leading position, but of late I have not planted it, as it cankers so badly. Hemskirk is more reliable and very little inferior in flavour. I find such kinds as Powell's Late and Frogmore Early very good in every way indeed; I think such kinds as Powell's and Large Early should be given a trial. Oullin's Early Peach, a very early kind, not large, but good, a very free and hardy kind, not much given to canker, may be added to the list.

Cherries are less fastidious as to soil and position, doing well on east and west walls. They are valuable, as they come in advance of all other fruits, and a few of them will repay culture on a north wall in favourable localities, as they then give a longer succession of fruit. Cherries, like Apricots, start very early into growth, and the same remarks are applicable as regards planting. The trees delight in a good loamy soil with efficient drainage. They soon suffer from drought; indeed, more so than other fruits, with the result that black fly and red spider soon play sad havoc with them. In the case of Cherries I do not advise raised borders, though deep planting should be avoided. Most of the Cherries do best on the Mahaleb stock, especially the Duke section and the Morello and Kentish varieties. The following may be termed a select list and noted for cropping and quality. They ripen in the order named. Early Rivers, black; Bigarreau Jaboulay, red; Frogmore Bigarreau, yellow; Governor Wood, red; Bigarreau de Mezel, pale red; Emperor Francis, red; May Duke, dark red; Archduke, red; Bigarreau Napoleon, yellow; Late Duke, red; Florence, pale red; Black Tartarian, black; and St. Margaret or Tradescant Black Heart, a grand late hanging variety for wall culture, and of good quality.

Plums.—These do well in the open as bush trees and standards. Much may be gained by early planting if the soil is light or on a gravel subsoil. There is a wealth of what may be termed midseason Plums, and an east wall devoted to later varieties will well repay for space occupied. Even large old trees pay for a shift if not fruiting satisfactorily. Such kinds as Coe's Golden Drop, which hangs well into October, Belle de Septembre, and Monarch are well worth including in the list of wall Plums for late supplies, and the well-known Jefferson, one of the finest Plums grown, is valuable for midseason fruits. Oullin's Golden Gage, McLaughlin's Gage, Transparent Gage, Kirke's, Reine Claude de Bavay, and Late Transparent Gage are all good, whilst for early supplies, Early Prolific, Czar, and Early Orleans are good croppers. For cooking, Victoria is the best all-round variety. Pond's Seedling, with Prince Englebert and Wyedale for late use may also be added.

Apples and Pears.—These should now receive attention. I find the wood is fairly well ripened, and such being the case, there will be little fear of the bark shrivelling. Out of hundreds of varieties of Apples, the well-known Cox's Pippin still stands at the head of the list. In selecting Apples and Pears much depends upon the soil, shape of trees, varieties, stocks, and other details. Whatever the soil or variety, it is well to plant before severe weather comes on; besides, by early planting a better selection is secured. Pears lose their leaves sooner than Apples, and though later than usual, there need be no delay. Pears are admirably adapted for cordon planting. For dwarf trees the Quince stock may be relied upon. They also bear very early and are most prolific. The Pear stock is used for trees required to grow freely or cover a large wall space. Pears also do well as espaliers if the soil is chalky or on gravel. The Pear may with advantage be grown in espalier form. Trained horizontally and allowed to make four or five tiers, Pears form a good dividing line. Pears on the Quince may be given a limited space, and should not be planted deeply. In planting these trees in the open, it is well to secure against wind. Wall trees or cordons must be allowed to settle, so that only a temporary support need be given. It is important that

newly-planted trees of all kinds should get a mulch or cover of strawy short litter after the soil has settled down to protect the roots from severe frost. G. WYTHES.

KITCHEN GARDEN.

VEGETABLES AND THE SEASON.—Many vegetables are turning out anything but satisfactory this autumn, owing no doubt to the fluctuating character of the past summer. Mention was made by Mr. Wythes in last week's issue of the ungainly size of Beetroot from ordinary sowings. Our sown batches are larger than usual, but those that were transplanted owing to blanks in the rows have grown to medium dimensions only, the colour is deeper and doubtless the flavour better than that of the coarse large roots. The one thing needful in Beet intended for use in the salad bowl is small size, as large slices look bad when sent to the dining table. I really think that in all gardens where Beetroot is esteemed it would pay to transplant a row or two with plants thinned from the last sown lot; these if put out on poor land and kept moist for a time will make just the right sized roots for slicing up. Dell's is still a popular Beet, but my favourite both as regards size and colour is Veitch's Selected Red. Brussels Sprouts and all the Kales have run unusually high this season, and having made a deal of soft late growth, were more or less nipped by the severe frost at the end of October, every vegetable being saturated when it came. This being so, it will be well to watch the Scotch curly Kale, and if the crowns show signs of decay, let them be cut and used at intervals. The same remarks are applicable to Brussels Sprouts also. It will also be advisable to go through the quarters of Kale on a dry day, and remove any decaying leaves from the base of the stems, as by leaving them others become affected.

CHOU DE BURGHLEY.—This will be found excellent for a change in the dining room at this season, and for a couple of months to come. The flavour of this Cabbage is quite distinct, its beautiful colour when well cooked being also greatly in its favour.

CLEANING ASPARAGUS BEDS.—The sooner now all Asparagus beds are divested of their ripened growth the better, as then the surface soil can be cleared of weeds which have grown since applications of salt became impracticable. Asparagus beds are often mown over in autumn, and in large gardens where many long beds are grown, this mode of clearing is almost imperative, as cutting off the stems with the knife would occupy too much time. In small gardens, however, where only a limited number of beds exists, I prefer to use the knife, as often the scythe tears the stalk instead of cutting it clean through, and the rupture extends right down to the crown, which is an evil. Autumn or winter mulchings are still practised by some gardeners, and that, too, when the beds are composed of strong loam and lie at a low elevation. On this account beds often suddenly deteriorate and even die off altogether. But while not approving of surfacing the beds with rotten manure at this period, I certainly think that the crowns and roots, the best of which lie nearest the surface, are benefited by a liberal covering of light manure. I always spread old hot-bed material over those under my charge, first applying a broadcast sprinkling of some good fertiliser, but then the soil is light and the subsoil well drained, and the roots never get too much moisture even in the wettest of winters. Many still entertain the idea that good Asparagus cannot be grown without the aid of plenty of salt sown on the beds at frequent intervals, but from experience I am convinced that that is more imaginary than real, as some of the very best growers seldom or never use it. However, salt being a good weed eradicator, a dusting of it may well be given as soon as the refuse is cleared off and before any mulch is applied. Care is needed in raking the beds, as after a mild genial autumn young shoots frequently spring up and are easily injured. In making new beds avoid elevating them to any great degree and having a deep trench between them, as on light soil this has a tendency to drain much of the needed moisture away from the roots, and on heavy land the water drains into the trenches and there often stops to work mischief, instead of gradually percolating evenly, though slowly, through the bed, and in due time escaping. Where old semi-exhausted beds are being forced, avoid planting in any of the old material; choose a new site entirely and use the old plot for other vegetables. The finest Peas, Beans and Cauliflowers may be grown on old Asparagus beds, bush fruit also doing well.

SOWING PEAS.—To some it may seem early to talk of putting Peas into the ground, but where the old practice of sowing in autumn is still adhered to the present time is about the best. Some ignore autumn sowings, but certainly where the border is light and warm and the situation good, and where, moreover, time can be bestowed on the arduous task of keeping mice from destroying the seed, there is a gain in it. Peas transplanted in spring, be they ever so gradually inured to the open air, are apt to suffer should snowstorms and cutting, frosty winds prevail just after putting them out, say, in March; whereas those sown now acquire a hardy constitution and readily respond to finer weather and longer days in February. Some method of protecting the seed from excessive rains should be devised, nothing answering better than wooden troughs, which can be stood between the rows when the weather is fine. I have found the plan I advised for the earliest spring sowings—namely, that of slightly raising the soil of the border where the drills are to be drawn, and of sowing fairly shallow. Treated thus, the seed is kept from rotting until germination takes place. If the ground is fairly rich, add no manure, but if any is necessary, use Mushroom manure in preference to that from the farmyard, as the latter encourages a growth which is prone to injury from frost, and also apt to fall a prey to basal rot. In regard to the varieties most suitable for sowing at this date, any of the small round-seeded sorts, such as William Hurst, Chelsea Gem and English Wonder (a Pea very highly praised by many good growers) may be depended upon. For my own part, I think Chelsea Gem cannot be equalled. Let the distance between the rows be the same as the height of the Pea, this admitting plenty of light and sun to the roots and haulm in spring. As soon as growth shows itself through the ground place small Yew or Fir boughs on either side of the rows as a means of shelter. I always sow Chelsea Gem in a cool pit at this season, and gatherings are then forthcoming from the middle to the end of May. Soot and lime must be used freely, as slugs often work mischief in mild winters. Sparrows likewise must be watched for, or a raid by them of a few days' continuance will blast the cultivator's hopes. A little leaf-mould strewn in the drills before the ordinary soil is raked in will assist root action.

J. CRAWFORD.

NOTES ON PLUMS.

THE following notes on Plums which we are enabled to publish through the kindness of our correspondents will doubtless prove interesting to our readers. They are from all parts of the United Kingdom. The following are the questions which we submitted:—

1. *The value of the Plum as an orchard tree, and how far its culture deserves extension, and in what soils?*
2. *Your opinion as to the value of new Plums, including those of Japanese, American, or European origin?*
3. *The best flavoured Plums?*

There are many extensive Plum orchards near this place, the chief sorts grown being the small black, red, and grey varieties, which are generally very productive, and mostly used for preserving. Some growers are now introducing newer and better sorts, the favourites being Orleans, Pond's Seedling, Red Magnum Bonum, Kirke's, Washington, Diamond, and Victoria.—W. SANGWIN, *Trelissick, Truro.*

The Plum is largely grown in this district as an orchard tree, but mainly the common Pershore or Egg Plum, as it is locally known. Rivers' Early Prolific, Victoria, The Czar, Cox's Emperor, Pond's Seedling, and Early Orleans are also grown. I consider it would pay to plant more largely the better varieties, and especially Damsons, as there is always a demand for them.—J. JUSTICE, *Nash Gardens, Kempsey.*

Plums are not grown as orchard trees to any extent in this district, growers preferring bushes or pyramids, being more easily managed and not so liable to injury from storms. As bushes or pyramids they give good returns. On the sides of the Tamer there has been a great extent of old woodland cleared and planted to fruit trees (mixed) with good results. Plums should be more extensively planted, as the fruit bears carriage well, and, if graded and carefully packed, reaches the markets in good condition and fetches good prices. The best sorts of Plums for such planting are Victoria, Denyer's, Czar, Rivers' Early Prolific, Pond's Seedling, Diamond, and Orleans. Our best-flavoured Plums, all on walls, are Denniston's Superb, Coe's Golden Drop, Jefferson, Kirke's, and the Gages in variety.—FRANK YOLE, *Endsleigh, Tavistock.*

The Plum has an undoubted value as an orchard tree, but for profit free-bearing sorts must be chosen, and a good central position within reach of the orchards for the disposal of the fruit without the risk and heavy expenses involved in railway transit. In West Wilts Plums are grown as orchard trees. There is a very good local sale for Plums, but whether it would be a good investment to extend their culture is a doubtful question, especially with the present foreign competition. Those at present grown in quantity are only suited for preserving, and are known as harvest Plums. Green Gages are planted by some, and as standards when they are in a matured stage they fruit very heavily, and are always quickly bought up in the open markets, where the bulk of the Plum crop is disposed of to the masses. Where Plums grow moderately and fruit freely is in soil of an open, sandy nature with a gravelly bottom. In deep clayey land growth is often too free, but the fruit produced on such is large, well-coloured, and good in quality. In soil overlying chalk or limestone Plums sometimes do well, but I am inclined to the belief that in "brashy" soil, to use a local phrase, Plums may be most profitably cultivated in orchard form. Of modern Plums, I think the late autumn ripening kind, Monarch, is likely to prove a decidedly popular and an invaluable one, there being so few dark Plums in use at the time, and although not so richly flavoured it should make a good companion to the Golden Drop. Those having superior flavour include the majority of the Gages, and especially the Transparent, Bryanston, Golden Drop, Reine Claude de Bavay, and Oullin's Golden. Others claiming first rank for quality are Jefferson, a fine yellow August Plum, Kirke's, Peach, Prince Englebert, Angelina Burdett, and De Montfort. The secret no doubt in getting full-flavoured and large fruit is to thin early in seasons when the trees are overladen. When allowed to remain on the tree as thickly as they set, size and quality both are absent; in fact, for market, the best kinds are no better than commoner ones in both respects. This applies to any form of tree, standard, bush, or espalier wall trained. Gathered in a green state before they overtax the trees, they may be profitably employed for domestic purposes, and it would be work amply repaid if they were thrown away in the event of there being no use for them in that condition.—W. S., *Trowbridge, Wilts.*

I consider the Plum to be one of the most valuable fruits for orchard cultivation, and it is very much in evidence in the orchards in this neighbourhood. Victoria is found the most remunerative in this locality; thousands of standard trees

of it are to be seen in the orchards in the Clyde valley, and which are this season bearing enormous crops. These orchards are well drained and sheltered from high winds; soil, light sandy loam. I consider Green Gage and Coe's Golden Drop the best flavoured.—J. Grahame, *Coltness, Wishaw.*

Victoria, Green Gage, and Kirke's are the varieties mostly grown in the open, while on the walls, in addition to these, are grown Orleans, Jefferson, Golden Drop, Pond's Seedling, Magnum Bonum, and Washington (old varieties), and Monarch, Early Orleans, and Rivers' Early Prolific (new varieties). These last three I believe to be excellent varieties. For flavour the best I find are Green Gage, Golden Drop, Jefferson, and Kirke's. For an open air cropper the Victoria is by far the best, but I would not advise the extension of Plum culture in this district. It is too cold and very windy, and the crop very uncertain. Only with the help of walls or good shelter would I advise planting of Plums.—R. C. Williams, *Crosswood Park, Aberystwith, S. Wales.*

It cannot be said that the Plum succeeds well in this district. We are very often without a crop when I see large quantities in the markets from the growers in England. With the exception of the Damson there are very few Plum trees to be found in the county, especially the southern districts. The Damson is very extensively grown in a district in the middle of the county, every farmhouse and cottage having its Damson orchard, and in the season if there is a good crop it is one of the sights in the local markets to see the long rows of peasant women with their baskets of Damsons. There is a local tradition to the effect that the Damson was first brought into the district by a monk of Slebeck from Damascus. The Damson district of this county is situated on the coal measure chiefly, but ramifies on to the old red sandstone, silurian, and limestone. The Damson appears to do equally well on all. The best Plum for the district is decidedly the Victoria, after that Jefferson and Prince Englebert. I find the three varieties named to be the only ones worth growing here. I should depend upon the Victoria for crop, and plant a few of the other two for variety. I have tried many other sorts, only to fail with them, generally through their cracking, as the soil is rather light and well drained. Our fruit trees are continually getting covered with Lichen to an extent that is unknown in the fruit-growing districts of England. I have not tried the newer varieties of foreign Plums.—G. Griffin, *Slebeck Park, Pembroke.*

I consider the Plum to be of considerable value as an orchard tree, because it is possible to select varieties especially adapted for the precise kind of soil one has to deal with. Owing, however, to the difficulty of finding a good market for the fruit when the crop is a good one, I think it undesirable to largely extend the culture of Plums except in soils and positions where Apples and Pears do not thrive. In the light warm soils around Warwick the following varieties succeed well as orchard trees: Pond's Seedling, Prince of Wales, Orleans, Goliath, Diamond, Monarch, White Magnum Bonum, Early Favourite, Prince Englebert, Early Mirabelle, Green Gage, Jefferson, Transparent Gage, Denniston's Superb, and Purple Gage.—H. Dunkin, *Warwick Castle.*

Plums do well in this neighbourhood, when they escape the spring frosts, but as the bloom is killed three years out of four, they are a very hazardous crop. I have some trees on high ground in a calcareous loam which bear good crops almost every year. In that situation Plums pay. Victoria, Pond's Seedling, Diamond, and Syston White—a local Plum similar to Pershore—do best, also Blecker's Scarlet. The best flavoured Plums here are Jefferson, Coe's Golden Drop, Green Gage, and Transparent Gage. I have had no experience with the newer varieties of Plums.—J. Lansdell, *Barkby Hall, near Leicester.*

In regard to the value of the Plum as an orchard tree, it is no doubt a profitable fruit to grow for sale, particularly when good markets are within easy reach. I think, however, Plums pay better in midland and northern districts where the markets are not so glutted at one particular time than in, say, the Kentish and Sussex gardens, which are within such an easy distance of London and where such enormous quantities are grown. It is the very heavy crops and consequent gluts in the London markets that make Plum growing unprofitable in those counties. In my opinion the finest flavoured Plums are Kirke's, Jefferson, Reine Claude Violette, Denniston's Superb, Maclaughlin's Gage and Coe's Golden Drop when well ripened; the last, however, unless under glass, does not often attain to maturity in this district. For cooking I do not think the Victoria can be beaten. My experience is that a medium loam of fair depth is best for Plum growing. When the soil is strong and retentive of moisture gross growth for years and often permanent unfruitfulness, in spite of root-pruning, are the result. It is astonishing how well Plums will do on light sandy soils if heavy and rich mulchings are annually given.—John Crawford, *Coddington Hall, Newark.*

Plums are at home here, doing remarkably well on the limestone formation, gritstone and toadstone (a volcanic formation). These and Cherries should be planted extensively, the climate suiting them. Rivers' Early Prolific and Early Orleans never fail. I see The Czar is extensively cultivated at the Chilwell Nursery as a suitable Plum for this district. Old trees of white Magnum Bonum, Victoria and Coe's Golden Drop carry very fine, highly coloured and flavoured fruit, the last being delicious and the best dessert variety. Goliath is a grand Plum, and when well finished is very striking. Angelina Burdett always fruits and is very distinct in flavour. Green Gage scarcely ever finishes up of full flavour; a late district may have to do with it. I am anxiously waiting to hear more about Japanese Plums. I have a tree from America sent by a friend and which I hope to fruit next year.—George Bolas, *The Gardens, Hopton Hall, Wirksworth, Derbyshire.*

The area of Plum plantations has trebled during the past five years, for the Plum grown as an orchard tree is a profitable crop generally. The trees flourish amazingly on the heavy, strong, deep loam of the Pershore and Evesham districts, giving early returns. The worst feature is, in a season like this the markets get overdone, and prices accordingly rule low. Pershore Egg Plum and Victoria are the chief sorts grown as orchard trees, with Gooseberry bushes underneath. The Gooseberries are picked green and marketed early. New kinds of Plums are not yet proven, except Rivers' Early Prolific. The Czar also promises well. Cox's Emperor, Pond's Seedling, and Belle de Louvain have been planted largely on account of their handsome size and consequent market value. The higher quality dessert Plums are shy bearers grown as orchard trees, but in sheltered places a few Golden Gage, Bryanston Gage, Kirke's, Black Diamond, and others are found to answer. I grow upwards of thirty varieties, and the best flavoured are Coe's Golden Drop, Old Green Gage, Deniston's, Jefferson, Nectarine, Transparent Gage, Oullin's, and Reine Claude de Bavay for late use are the best.—W. Crump, *Madresfield Court.*

I think there is no doubt the Plum would pay in most districts planted in orchards, provided good sorts were used, strong growers and such kinds as are most suitable for market being preferred. As regards soil, the Plum is not particular so long as it is not bog or too sandy; any loam suits them, a calcareous loam the best of any soil. Most of our trees here are old varieties, but among the newer ones, Belgian Purple, Grand Duke, Sultan, The Czar, and Monarch appear likely to do well. For flavour, Green, Purple, Transparent, and Bryanston Gages, Coe's Golden Drop, Jefferson, Reine Claude de Bavay, Oullin's Golden Gage, and Kirke's Purple among dessert kinds are the best. Belgian Purple, Cox's Emperor, Diamond, Early Prolific, Goliath, Old Orleans, Wilmot's Orleans, Sultan, The Czar, Monarch, Pond's Seedling, and Grand Duke are the best cooking kinds. Victoria and Pershore are, perhaps, the most prolific, and both good for kitchen use and preserving.—G. Ringham, *Wrotham Park, Barnet, N.*

Plums are rather extensively grown around here, and generally are carrying good crops. The Red Magnum Bonum is the greatest favourite for market, as it bears freely, is of good size, and the colour is brighter than that of the Victoria, which is also largely grown and does remarkably well. The standards bear most freely of these varieties. If orchards are to be made I would advise planting half-standards, as they do not feel the effects of being blown about the same as standards; as they grow they can very easily be trimmed up to the required height. Gooseberries, Currants, or Strawberries can with advantage be planted between the Plums until the latter shade them too much, when they can be taken out. I would not advise planting too largely of Plums, as there are already enormous quantities grown, and frequently they do not pay for gathering and marketing, although near large towns there is a great demand for fruit. In this neighbourhood prices generally are high. The following are the best dessert Plums here: Old Green Gage, Coe's Golden Drop, Kirke's, Jefferson, Transparent Gage, Bryanston Gage, Oullin's Golden Gage, and Denniston's Superb.—Herbert Noble, *Ashton Court, Bristol.*

I think the Plum a most useful fruit, and should pay to grow as an orchard tree, as it succeeds in almost any soil, and in a fair season it bears good crops, and in many seasons most abundant crops. Plums like a good light loam, and a south or west aspect. The best kinds that I grow for dessert are Coe's Golden Drop, Green Gage, Denniston's Superb, Guthrie's Late Green, Ickworth Impératrice, July Gage, Jefferson, Kirke's, Purple Gage and Transparent Gage; for cooking, Kirke's, Pond's Seedling, Diamond, Victoria, Washington, White Magnum Bonum, Prince of Wales, Orleans, Smith's Early Orleans, Early Prolific, and Goliath.—Wm. Smythe, *The Gardens, Basing Park.*

The Plum is an excellent and profitable orchard tree, doing, so far as my experience has gone, very well on all sorts of soil, though soils of a sandy nature, or where sufficiently deep on chalk, are the best. Such varieties as Rivers' Early Prolific, Czar, Victoria, Pond's Seedling and Monarch, and Farleigh Prolific, and Prune Damsons prove amongst the most reliable croppers. It is unfortunate that we cannot find the highest flavour in the fruits on standard or orchard trees. Whilst these give excellent cooking Plums, the best flavoured varieties are more fitted for wall culture.—A. Dean, *Kingston, Surrey.*

I consider the Plum should be grown very much more extensively as an orchard tree than it is. A good loam resting on clay suits the Plum admirably. The kinds I would advise for orchard planting are Victoria, Prince of Wales, Orleans, Green Gage, Rivers' Early Prolific, and Prune Damson. In my opinion the best flavoured Plums are Green Gage, Jefferson, and Coe's Golden Drop, the last not being grown nearly so largely as it deserves. It scarcely ever fails here planted on east and north walls, and I often keep good fruit till the end of November.—Edwin Beckett, *Aldenham House Garden, Elstree.*

Respecting the cultivation of Plums, I have grown them equally well on heavy, medium, and light soils, but I prefer a good loam on chalk or limestone to any other, and unless a good market can be found so that any large quantity can be dried or made into jam, I would in no case advocate extensive plantations, for well do I remember several abundant crops that proved worthless as far as profit goes, with the exception of Green Gage, which always is much sought after. Were I inclined to grow extensively I should select very early and late kinds, as a glut of medium season varieties can generally be depended on. The kinds I have found to suit me best are Early Rivers, a good first early that should be in the most select collection, being prolific and a sure bearer. Green Gage I need not speak of. Jefferson is one of the finest Plums that can be found, both as a dessert and cooking sort, a splendid cropper. This has always been my favourite with

the exception of Golden Drop. Oullin's Golden is also another most desirable kind, and one that should not be left out of the first dozen. The same can be said of Transparent Gage, in every way a charming and distinct variety. Prince of Wales is another that has proved with me to be excellent. Victoria, the most useful and prolific of Plums, needs no comment from me, as it is a universal favourite. Ickworth Impératrice is a very late and excellent kind, and should be extensively grown. If on a north or east wall this can be had very late and good even in November. Kirke's carries a fine bloom, and is perhaps the handsomest of the blue kinds; it is a good bearer and of excellent quality. Prince Englebert is also a great favourite of mine, and should not be omitted from any collection. The same must be said of Pond's Seedling.—Chas. Ilott, *Caversham Park, Reading.*

Orchids.

MASDEVALLIA TOVARENSIS.

The majority of pure white-flowered Orchids are high in price and rare, and consequently beyond the means of many cultivators. Of ordinary species, of which the type is obtainable for a few shillings, a white form when it turns up is often worth many more pounds. The flowers of the species named above are of the purest white and as beautiful as those of many rare and expensive kinds. Fortunately, the price brings it within the reach of all. It is, moreover, very free-flowering, and the blossoms last well in good condition. The flower-scapes attain a height of about 6 inches, and each bears from two to four flowers. The leaves are light green, erect, and not quite so long as the spikes. Like all in this genus, M. tovarensis delights in a cool and moist atmosphere while growing, and during the summer months requires to be very closely shaded, both on account of the foliage and also to keep the temperature sufficiently low. It delights also in a constant supply of fresh air, and the ventilators should at the season mentioned be always open day and night. This constant rush of air, of course, quickly dries up all the atmospheric moisture, and the syringe must be very freely plied about the stages and between the pots. For this reason partly the pots containing the plants are usually raised upon others inverted, otherwise in damping, the compost would be splashed with water each time and it would be difficult to decide whether or not the plants are dry at the root. Generally, when the weather is very hot and dry, the house in which the plants are growing will need damping as many as half a dozen times a day. In winter, too, this species and, indeed, all in the genus require more moisture in the atmosphere than any other Orchids. At this season M. tovarensis must have a little more heat than is usually given to Odontoglots of the coolest section, though if the temperature does not go below 50°—and this is not too high for the other kinds named—all of them may be easily managed in one house. The plants are sometimes moved into the Cattleya house, and this is better than allowing them to get too cool, but the comparatively dry atmosphere of this house is not suitable for them, or, at all events, only when in blossom. This Orchid never requires drying off at the root either in summer or winter, but during the latter season water must be very judiciously applied, as the roots are easily injured either by too little or too much. The appearance of the Sphagnum growing about the roots is the best guide to follow. This, when kept dry for any length of time, turns white and feels hard and dead to the touch. For Masdevallias it should never reach this stage, but only enough water must be given to prevent this in winter. The most frequent cause of ill-health of M. tovarensis is over-burdening the roots with compost, this latter being often too close and heavy. Small pots thoroughly free from dirt and grit should be chosen, and filled at least two-thirds of their depth with clean potsherds, this being covered with a little moss. A little of the old material will be retained about the roots, and this will then usually bring the base of the leaf-stems a trifle above the rims. If it does not, a few more crocks or small charcoal should be placed under them sufficient to raise them to the height desired. Have ready clean Sphagnum and good peat fibre in equal proportions, and wrap a little round the roots. Mix in a few bits of potsherd very finely broken and surface over with the peat and moss, only pressing this sufficiently to keep the plants free from rocking about. The early spring is the most suitable time to repot, as the roots are soon afterwards active and take readily to the new compost. Until this is the case give only enough water to keep the moss alive, but afterwards water freely. If kept free from insects the growth will be rapid, and late in autumn



Masdevallia tovarensis.

the spikes will push up. These continue to produce flowers several seasons in succession, so if the blossoms are not required for decoration they should not be removed. If the flowers are cut separately and wired it answers the same purpose, though of course when so treated they do not last so well. Taken all round, M. tovarensis is one of the most useful cool-house Orchids, and wherever white flowers are wanted in quantity a good number of plants should be grown, while the amateur with only very little space at command will find that it will repay a little care. As the specific name implies, it is a native of the neighbourhood of Tovar, in New Grenada, and as it was the first known of the large-flowering section of the genus, it was much prized and very expensive when introduced. It first flowered in England in 1865.

Cattleya maxima.—This species is very widely distributed naturally and is an extremely variable kind. I recently saw a nice piece of the short-bulbed, deeply-coloured form which had been imported as C. Trianæ. The spike was carrying three flowers, each about 4½ inches across, of a very distinct purplish rose colour on the petals, the sepals and lip being much lighter, the latter being stained in the centre with orange, and having deeply coloured stripes leading to the throat. It is an easily grown kind, thriving well in company with others of the labiata group in pots with peat and Moss. The typical C. maxima is an old plant in cultivation, having been discovered growing on rocks and trees in equatorial America by M. Hartweg in 1844.—R.

Cypripedium Sallieri Hyeanum.—This is a pretty variety in the way of C. insigne. The whole flower has a decided yellow tinge, this being especially marked about the lip. The petals have the upper side deep yellow, like those of C. villosum, the lower portion having a few spots of purplish brown. The dorsal sepal has a broad margin of white with purple spots about the yellow base. The typical plant is supposed to be a natural hybrid between C. insigne and C. villosum, while this variety may possibly be the progeny of the former and C. villosum aureum, which it much resembles in colour.

Odontoglossum lyroglossum.—This pretty species is now in bloom and may be mentioned as one of the handsomest of the yellow flowering Odontoglots. In habit it resembles O. luteo-purpureum, and it has been suggested as a natural hybrid between this kind and O. Pescatorei. The sepals and petals are yellow blotched heavily with brown, the lip similar in ground colour, but without the spots, or only a few small ones. This is heavily fringed, and the whole flower is about 3½ inches across. O. lyroglossum thrives well in the cool house in small pots in peat and Moss and should not be dried off at any time.

Oncidium Forbesi grandiflorum.—This is a decided advance on the typical O. Forbesi; the flowers are very large, often 3 inches across, and highly coloured. The band or margin of yellow is much narrower than in the type, but the sepals and petals are of great substance, overlapping each other. The growth is not very vigorous, and the leaves are of a bronzy hue like those of O. crispum, which it somewhat resembles in habit. It should be grown on rafts or in shallow pans, and only a thin layer of compost is needed.

Odontoglossum Sanderianum.—In habit and general characteristics this peculiarly attractive species strongly resembles O. nævium, but the flowers are quite distinct in colour. These are produced on rather densely-set racemes about a foot in length and each flower measures about 2 inches across. The sepals and petals are narrow, pale yellow, with many spots of reddish brown; the lip has a larger blotch in front and is lightly fringed at the edge. The plant is very easily grown, and should be suspended in small pans or pots near the roof in the cool house. A free circulation of air is of the utmost importance, and therefore if the plants are hung near the ventilators, so much the better. Good drainage must be afforded by filling to within an inch of the rim with crocks, above this dibbling the compost firmly about the roots. Good peat fibre, chopped Sphagnum and finely broken crocks are all that is needed to grow it well. After potting, the plants require only enough water to keep the Moss alive, but as the roots begin to run freely more must be given, and at no time must the plants be dried off. O. Sanderianum is a native of New Grenada, and was introduced in 1881. The flowers are sweetly scented and last several weeks in good condition if kept dry.

Oncidium Jonesianum.—This very distinct-looking Oncidium is flowering freely, the sunny weather experienced during the early autumn having apparently suited it. The pseudo-bulbs of this kind are very small, the leaves constituting the chief part of the plant. These are about 1 foot in length, rush-like, channelled and deep green. From the base of the newly-formed growth the flower-spikes proceed, and each carries on strong plants upwards of a dozen flowers, each about 2 inches across. The sepals and petals are yellow with brown spots, and the broad spreading portion of the lip is pure white. O. Jonesianum delights in abundance of heat and ample moisture, and should only be lightly shaded during hot weather. It dislikes much compost about its

roots, and many growers are in the habit of growing it on blocks of cork or wood. This treatment involves so much trouble in watering, that it is hardly advisable. A good plan is to wire the plants to blocks and sink these in pots in crocks and a surfacing of Moss, placing the pots on a shelf near the glass and watering them almost daily in hot weather. This ensures a moist atmosphere about the roots which is almost impossible on the bare blocks. O. Jonesianum is a native of Paraguay, having been introduced from there in 1883.

CYMBIDIUM GIGANTEUM.

Although closely resembling C. Lowianum in growth, this is quite distinct and perhaps preferable to it in the flowers. They usually commence to show the flower-spikes about the same time, but those of C. giganteum come much quicker to perfection, not, however, lasting so long in good condition. The flowers are large, and produced on rather stiff-looking spikes from the base of the pseudo-bulbs. The sepals and petals are yellowish, suffused with reddish brown, and have also streaks of purple. The lip is yellow and brown with crimson spots and blotches. C. giganteum has been described as of a shy-flowering habit, but with me it is a very free and constant bloomer. It is very easily grown and not fastidious as to temperature. Some growers prefer the cool house for this and C. Lowianum, and in a letter before me from a friend who grows them well he says that he has so dealt with all his plants. But wherever they are grown they require a substantial compost. Good fibrous peat, loam, and chopped Sphagnum in equal proportions, with a liberal addition of charcoal and potsherds, will grow them well, and an abundant supply of water is needed while growing. A few waterings with liquid manure during the time the spikes are forming are of assistance, this being made of cow manure and soot highly diluted or from any well-prepared artificial fertiliser. The plants root very freely, and consequently the compost soon becomes a network of the large fleshy roots, necessitating frequent repottings until they get too large for convenience, when they must either be broken up or more highly fed in order to ensure luxuriance of growth, without which the flower-spikes will be small and the blossoms poor. The plants are very subject to the attacks of a small brown or white scale, which clings to the foliage most tenaciously. It is often impossible to remove these in the ordinary way by sponging, so I usually have for the purpose a small stiff brush, or a pointed stick where this cannot be used. It is an Orchid which seldom gets out of order at the roots, and never if ordinary care is taken with the drainage and watering; but should this occur the plants should be shaken clear out of the soil and well washed in tepid water, afterwards repotting in a rather lighter mixture than recommended above and kept in a warm house for a time. C. giganteum is a native of Nepaul, and was discovered by Dr. Wallich, who introduced it to this country in 1837. H. R.

Cypripedium Charlesworthi.—This species is one of the most valuable additions made to cultivated Cypripediums in recent years. It was first exhibited a little over two years ago at the Drill Hall, Westminster, by Messrs. Charlesworth, Shuttleworth, and Co., and was then awarded a first-class certificate. Since that time, having been imported in considerable quantity, it has become quite a popular Orchid, as its beauty and distinctness certainly entitle it to be. In relation to other species of Cypripedium it most nearly approaches C. insigne and C. Spicerianum, although, of course, it is perfectly distinct from both, as well as more attractive. The feature of the flower, as in those two species, is the upper sepal. This measures 2½ inches to 3 inches across, and is almost orbicular in outline; the ground colour is whitish, tinged with rosy purple, and traversed by darker-coloured veins. The petals and lip are of less conspicuous beauty, but serve well to heighten the effect of the large upper sepal. They are of a brownish yellow, the petals being 2 inches long and the lip somewhat shorter. The staminode is of a pure china white, and being of exceptionally large size is a conspicuous feature of the flower. The leaves are strap-shaped and of rich lustrous green.

Cattleya Bowringiana.—Although of comparatively recent introduction, this has become a very popular plant, and is a decided acquisition to the genus. It is a healthy growing Orchid, and thrives well in pots in the usual peat and Moss mixture. The pseudo-bulbs are about 18 inches high, and from between the two apical leaves the flower-spikes spring, bearing on strong plants upwards of a dozen flowers on each. These are individually about 3 inches across, the colour being bright rosy purple with a white throat. The ordinary Cattleya house routine suits it well, but the leaves are apt to become infested with thrips, which must be kept under if good results are looked for. It is a native of Honduras, and was introduced in 1884.

Cirrhopetalum Medusæ.—All the Cirrhopetala are more or less remarkable in the structure of their flowers, but in none of them does this character become so striking as in C. Medusæ. This species—of which a good specimen is flowering now at Kew—is a native of the Malacca Straits. It was introduced about 1840, but owing to its never having been imported except in a haphazard way along with other Orchids, it is a comparatively uncommon plant. It is an epiphyte, with ovoid, angled pseudo-bulbs, which carry a single leaf of very hard, leathery texture and about 6 inches long. The flowers are crowded in a dense umbellate cluster at the top of a slender, erect scape. They are small, but remarkable for the extreme attenuation of the sepals. These at the base are one-eighth of an inch to a quarter of an inch across, but taper thence into thin, pendent tails 4 inches to 5 inches long, giving to the inflorescence, as Lindley said, "the appearance of a head of long dishevelled hair." The sepals are creamy white, speckled with pink; the petals and lip are yellow, but small and inconspicuous. The species is not only pretty and interesting, it has the additional recommendation of being easily cultivated and a robust grower. Coming from the Malayan region, it is naturally a stove plant and moisture loving. It is best grown in baskets, in a compost of peat fibre and Sphagnum. It should be rested by withholding water during the winter season, giving sufficient, however, to keep leaves and pseudo-bulbs plump.

FLOWER GARDEN.

FLOWERS IN LONDON.

Ah! wad some power the giftie gi' us
To see oursels as ithers see us.—Burns.

In writing on Trafalgar Square in The Garden some few weeks ago I stated that London had for centuries been a place of gardens, and that it was fresher and greener and possessed of more flowers to-day than perhaps ever before. It is a long time since King Henry VIII. and his court "roade a-maying from Greenwich to the top of Shooter's Hill" (in 1515), and it is also a long time since "the tall may-pole once o'er-looked the Strand," but even before these events the London citizens emulated each other in the care of their flowers and gardens. Nor were fruits neglected, since even Shakespeare makes one of his characters allude to the "good Straweberries" he had seen in the Bishop of Ely's garden, in the vicinity of the Holborn of to-day. History teems with incidental allusions to the old gardens of London Town, and it is pleasant to find that visitors from other shores are often struck by the profusion of our urban squares and public gardens, and by the luxuriant growth of bright or fragrant flowers in the windows and balconies not only of the best houses in the best streets and squares, but also in the backyards, alleys, and stable-yards everywhere. Not alone is it a fashion in Belgravia or in Mayfair, but in the crowded alleys and courts of the East-end you meet with windows bright and cheery filled with quaint old-world plants, with Toadflax and Saxifrage, Musk, red Cactus, partridge-breasted Aloes, or with stately old one-sided plants of scarlet Pelargoniums, or red and white Fuchsias laden with bloom. In no other city in the world is that personal form of decoration known as the "button-hole" such an institution as it is in London.

Best of all, however, are the now numerous open plots and open spaces, like the gardens along the Embankment, the gardens at Westminster, at the Temple, at St. Paul's Churchyard, with seats where the workers or visitors can rest, and watch the pigeons on the cool green grass, or hear a fountain splashing under the Plane trees, as in the old Temple Gardens. London may have been "a great wen," "an excrescence on the fair face of Nature" in the long ago, though in reality we doubt it; but to-day, even if more sombre than Vienna and more smoky than Paris and noisier than Venice, it can still hold its own as one of the greatest and most beautiful cities in the world. This much seems to have been the impression it made recently on the editor of *Harper's Magazine*, who expresses himself as both surprised and charmed by the increase of pleasant amenities and of the enhanced agreeableness of London to-day as compared with London of a quarter of a century ago. He says:—

It is certainly a brighter and pleasanter city than it was twenty-five years ago, and it naturally follows that it is a healthier and happier place as well. Window-gardening has done as much as anything else to change the aspect of London. It has given the needed freshness and colour to the otherwise gloomy houses, and has transformed many of the streets into highways of beauty. London has also been cultivating its small parks and public gardens, and in almost every quarter the eye is cheered and pleased with greenery and with bloom. The great amount of life in the streets, and the gay apparel, with the flowers in the windows and the creepers on the walls, the bloom in arches and courts make of London in the summer the handsomest and most interesting city in the world.

After all, London is said to be the centre or focus spot of all that is best worth seeing and is most enjoyable. It is a beautiful new picture in a charming old frame. It is a compliment that we can all appreciate, this spontaneous notice of our gardening instincts, coming, as it does, from a literary man of such keen observation and unbiassed judgment; but we should have liked to have shown our visitor some of the historical gardens, not only in and near to London, but also throughout the country as well; the gardens at the Tower of London, at the Temple, at Lambeth Palace and at Hampton Court, or those at Hatfield (frequented by the Princess Elizabeth before she became Queen), or those at Burghley, near Stamford, where she visited her Lord Treasurer, the great Cecil, and laughingly told him that her money and his own brains had made it one of the most beautiful places in England. We could have shown him Chatsworth and Haddon Hall and Belvoir Castle, or the fine gardens in the Dukeries, such as Welbeck and Thoresby, Colwick Hall (where Lord Byron's Mary Chaworth lived as Mrs. Musters), Newstead Abbey, and a passing glance could have been had of Kenilworth and Warwick Castles, and we could have

inhaled the summer freshness of Rosemary, Lavender and Golden Thyme in what was once Anne Hathaway's garden at Shottery village, near Stratford-on-Avon. Then there are all the regal gardens of the south and those of the north country, that shed such a lustre on British gardening. But at all events we must rest and be thankful, and feel grateful to Mr. Howells for his appreciative article on England and her improved and improving institutions from which the above extract as to London gardens and their flowers was taken.

F. W. Burbidge.

New Water Lilies.—The new Water Lilies are thriving well in the lake at Didlington Hall, Norfolk. They are planted out in the lake near to the mansion in water from 12 inches to 18 inches deep' and I was told they had bloomed abundantly during the summer.—J. Crook.

Schizostylis coccinea.—I was pleased to see Mr. Day's useful note (page 330) on this good old plant. One seldom sees it. A gardener under whom I served used to grow a quantity of it on a west border, the plants being lifted with as much soil as possible in October and planted in boxes and pans, being then removed to a cold vinery or Peach house and placed in a light position. Here they afforded a long succession of their brilliant spikes for a considerable period. They proved most useful for cutting, and lasted a good time if given a change of water. Scarlet flowers are none too plentiful at this date, and it would, I am sure, pay all who need variety in cut bloom to get a stock of Schizostylis coccinea and treat in the way described. Replanting may be done in March in light loamy soil, adding a little leaf-mould. —J. C.

LILIUM LONGIFLORUM IN SURREY.

This Lily, which is imported into England every season in large quantities from Japan, is grown in the gardens at Great Tangley Manor, near Guildford, in a large tract of open ground planted with dwarf Azalea mollis and Heaths in light alluvial soil mixed with a little peat. The bulbs are placed among the low bushes of Azalea and the Heaths, which give them the requisite protection against the cold winds of the spring, and at a slightly higher level just above the Azalea garden is a large sheet of water, from which irrigation is easy in dry weather. At Tangley these Lilies are found to be the hardiest of garden flowers, requiring no protection during the winter and blooming profusely in July and August, most of them bearing two or more flowers, very many of them five or six, and some as many as eight on a single stem. They grow from 2 feet to 3 feet high, and some higher. The leaves are a beautiful shining green, the flowers in nearly all cases absolutely perfect both in form and colour—the purest white. While other Lilies are much subject to disease and can hardly be depended on to flower any two years alike, it is seldom that any disease attacks the longiflorum Lily. At Tangley there is certainly no plant that bears the same almost invariable appearance of perfect health and strength. Last year there were probably as many as from 1500 to 2000 of these Lilies in flower at one time—one group of about five hundred, others of from one hundred to two hundred, and others in smaller groups of from ten to fifteen. Grown in these quantities, the flowering season is prolonged over a month or six weeks. The bulbs, which generally reach this country in the finest condition packed in the yellow soil of Japan, deteriorate after a time, and should be renewed to some extent every year, but they can be had in lots of from one hundred to two hundred at many of the London auction sales during the season at very moderate prices if bought wholesale in the cases in which they arrive from Japan.

W. F.



Lilium longiflorum in Surrey. From a photograph by Mr. W. Flower, Great Tangley Manor, Guildford.

The Belladonna Lily in Norfolk.—It is a common idea that this lovely hardy bulb must be placed under a wall adjoining a warm house. Again, many people are under the impression that it can only be grown in the south and west. I am fully aware in Cornwall and Devonshire it does magnificently. For several years this Lily has bloomed most satisfactorily in the kitchen garden at Didlington Hall, Norfolk, on a south border from 8 feet to 12 feet from the wall. I am told it never receives the least protection. The stems were strong and the blooms large. The soil is of a light sandy nature and very dry.—J. Crook.

Delphiniums flowering twice in one season (*S.*, p. 310).—There is nothing unusual in the Delphiniums pushing up a second crop of flowering stems in the same year. Indeed, this may be accomplished even in ordinary seasons with many kinds, provided the plants have been planted one whole year. The only thing to be done is to cut the flower-spike clean away as soon as the flowers fade, when the strongest of the clumps will quickly push away into new growth, and many will bloom in the ensuing autumn. The old spike must be cut away close to the soil, say to within 4 inches of it. Much the same remark applies to the single and double Pyrethrums.

Where a collection of either of these is grown, a second crop of flowers is always welcome, as they come at a time when such things are by no means plentiful. Of the Pyrethrums I have had flowers equally good in autumn as in early summer. The second spikes of Delphiniums usually attain to about half the height of the first ones, but are decidedly welcome notwithstanding.—E. J.

FLOWER GARDEN NOTES.

Mulching.—The weather of February, 1895, which crippled, and in some cases destroyed things that commonly rank as hardy plants, points to the advisability of carrying out surface-mulching to a much greater extent than has hitherto been the case, and as the glass already drops below freezing point with a persistency that is rather uncommon thus early in the winter, the mulching may well be performed at once before the frost has a chance to penetrate deeply into the ground. Partially decayed leaves answer the purpose of a mulch fairly well, but are only admissible in sheltered situations. As this material dries quickly in the open, and with the first high wind is apt to be blown in all directions, a better material is found in that obtained from a heap that has been built up of stable litter, garden refuse and leaves, and allowed to heat sufficiently to kill insects without getting dry to an extent that will destroy its nutritive properties. Among the plants to be treated are the tuberous and fibrous-rooted Tropæolums, also beds that having been clothed during the summer with the Canary Creeper are to be similarly treated another season and are not to be filled during the winter. In the case of the annual this mulching is essential to the preservation of the seed and the young seedlings that will come up thickly another season if the frost is kept out of the ground. Such seedlings are more robust and come more quickly into flower than those turned out of pots from seed sown in early spring. Nearly the same remarks, so far as preservation for another season is concerned, hold good respecting the Sweet Tobacco. This is sometimes used, it may be accidentally, in a situation in which it is seen to great advantage, hiding a bit of unsightly wall, for instance, or perhaps facing a row of evergreen shrubs or young coniferæ, and its perpetuation by root-propagation can be ensured by the aid of a substantial mulch. Although in the early season appearances seemed to indicate that the clumps of outdoor Fuchsias were destroyed, they have come up again and have grown and flowered well, although the size of the clumps has been considerably lessened. It will be well to mulch these as soon as the growth is cut back, also Montbretias, Gypsophila, Lobelia cardinalis and L. fulgens, and indeed anything that suffered in the slightest degree last winter. Though this was an exceptional experience, we may get the like again, and a little attention at the present time may save a considerable amount of replanting another spring.

Plants for dry borders.—The folly of planting the common summer-bedding plants in dry poor spots where they can receive little after-attention was again apparent in the summer of 1895, and in one or two instances where such planting was made I noticed the things presented a singularly pitiable appearance. It should be widely known that there are many herbaceous plants that will do fairly well in such situations, and all of them that will stand the winter well should be planted as soon as possible, that they may get a good hold of the ground before the advent of frosty weather. Where practicable, and if time permits, the border prior to planting may be enriched and made more retentive of moisture by the addition of a compost (if none other is available) from a heap of fairly loamy road sidings to which a liberal dose of cow manure has been added. Among the plants likely to do well will be the gold and silver Thymes, the alpine Phloxes, Iberises, the hardy Silenes, the silvery Veronica and Santolina; and among taller things, Saponaria splendidissima, Nepeta Mussini, the Megaseas, some of the Lychnis, Linarias, Eryngiums and Centaureas. If a dwarfer carpet is considered advisable between the groups of different species, it may be formed of hardy Sedums and the double Chamomile, the latter to be allowed to flower, or not, as may be required. The mulching advocated in the case of ordinary herbaceous borders and for somewhat tender plants is absolutely essential in the case of dry, sloping ground, and should be put on immediately after planting.

Polyanthus.—If there is one hardy spring-flowering plant used largely in the flower garden that has come very prominently to the fore of late years it is the Polyanthus family, and the many different shades of colour available enable the flower gardener to make an excellent display with this family alone. Thus, if one can pick out, say, half a dozen distinct shades, beds can be filled respectively with them, or they can be mixed together; also, if batches of the true Polyanthus type and the Primrose-Polyanthus are grown separately as seedlings, they may either be mixed at planting to give a broken surface to the bed, or the one may be used as a centre block and the other as an edging. If there are any specialities among the old stock that it is desirable to increase by division, the operation may be performed at any time. Still following up the question of mulching (with which these notes were started), I may mention that all members of the Polyanthus family are immensely benefited by it in all light dry soils. They will succeed fairly well in such soils always provided the roots are kept somewhat cool—a state of things in exposed situations and with a hot spring that is only effected by the aid of a heavy surface-mulching. The improvements in the size and shape of flower have been very marked within the last few years, especially in the purple and crimson shades, and some very beautiful varieties are annually obtained from a packet of good seed.

Autumn tints.—Although a continuation of frost has been responsible for the destruction of the flowers, and only batches of Scabious and Starworts that receive nightly protection are still available, the decaying foliage of tree, shrub, and flower is beautiful in its way and helps to make an attractive picture. I have noticed specially this autumn the marked difference in the prolongation of the decay and the partial or rapid assumption of the autumnal tint. Again, whilst one tree or shrub is beautiful in its decay right away to the final falling of the leaf, in others the foliage in its last stage presents a very dingy, dirty appearance, a remark applicable to both native and exotic trees. Two exotic trees close together in our grounds represent the earliest and latest stage of leaf shedding; these are Gymnocladus canadensis and Taxodium distichum. Two others not far apart, viz., Ginkgo biloba and Laurus sassafras, are noticeable for the different effect produced on the foliage by frost. In the one case the tree was completely stripped in a few hours; in the other, the foliage, although browned, still hangs tightly. The hardy Azaleas are almost as beautiful in their autumn dress as when clothed with flower, and in their case the prolongation of autumn tints where the plants are sheltered is very marked. One of the brightest bits of colour at the present time is furnished by a bed of these Azaleas that, having become somewhat drawn and leggy, were pegged down last spring to within 18 inches of the ground, thereby transforming the bed, before somewhat patchy and showing many gaps, into a dense mass of foliage. The only drawback to the arrangement at present is the somewhat formal appearance, but that will be altered another season, some shoots naturally growing away from the rest and standing well above them. E. Burrell.

Claremont.

Bouvardias for the flower garden.—So far as I have seen, only a few of the gardeners in the west of England use Bouvardias in the flower garden. There may be good reasons for this, as it is probable that they would prove of little value in a less favoured climate; but where they will bear the exposure, I do not know any plant that gives less trouble after a stock is obtained, or one that makes a choicer, brighter bed over a longer time than the single form of Hogarth. I saw a bed at the end of September in Mrs. Hancock's garden at Hulse, near Taunton, the plants bristling with clusters of flowers. I was told the plants were in the same condition when set out early in June, and all through the summer they had made a still better display. The habit of growth of this Bouvardia makes it suitable for filling flower beds where a bright subject is required, and at the same time an absence of unruly growth desirable. Only those who have seen the plant so treated can realise the freedom with which it flowers or the length of time it continues in that condition. This will be better understood, perhaps, if I briefly describe the way in which the plants are treated. The first year four or five plants are put into 4½-inch pots and grown in a cold frame. In the following winter they are pruned rather hard, and are then shifted into 6-inch and 7-inch pots, according to their strength. In the spring they are placed in a cold pit, where they remain until it is safe to risk them in the open air. In May the pots are plunged just below their rims in the soil, and remain so until the autumn. Early in the following spring they are again pruned rather hard, quite half of the old soil is shaken away from the roots, and after being repotted they are returned to the cold pit again, to be treated as before. Some of the plants which I saw were seven and eight years old.—J. C. Clarke, *Taunton.*

Societies and Exhibitions.

ROYAL HORTICULTURAL SOCIETY.

November 12.

There was again at this meeting a perceptible falling off in the extent of the exhibits. Nevertheless, there was ample abundance of quality and variety to well repay one for a visit, much more so than in many competitive exhibitions with a considerable outlay of money in prizes.

Chrysanthemums, as a matter of course, formed a conspicuous feature, the one welcome fact above all others being the general departure from the orthodox show-boards for the arrangement of the blooms. These were chiefly shown with small fine-foliaged plants intermixed or upon longer stems with the foliage left upon them. In this way a capital display was made by Mr. Wythes, from Syon Gardens, he being about the first to adopt this plan. Another excellent arrangement came from Messrs. H. Cannell and Sons, and yet another from Mr. T. S. Ware. Some superb blooms of the fine yellow incurved Japanese Thunberg, still unsurpassed in its form and colour, came from Mrs. Crawford, Gatton, Reigate. Mme. Marie Hoste, from the same source, was of equally good quality. Winter-flowering Geraniums from Swanley were also a conspicuous feature, as were both Canna Queen Charlotte and the new giant Sweet Violet Princess of Wales, best described as a glorified Czar. The javanico-jasminiflorum hybrid Rhododendrons from Chelsea exemplified in the best possible manner the value of these splendid varieties for this season of the year. Orchids were again a great feature, Cattleya labiata still being most prominent, and that in great variety. C. aurea was also shown in superb condition from Stand Hall. Some fine hybrid Lælio-Cattleyas and Cypripediums came from the Veitchian collection, and likewise from Mr. Ingram at Godalming. Of other Orchids, Habenaria Susannæ is worthy of special note, a lovely example being shown from the St. Albans collection with no less than ten spikes. Of fruit there were several excellent collections, notably the grand examples of English-grown Smooth Cayenne Pine-apples from Frogmore and the splendid bunches of Chasselas Napoleon Grape from Mentmore, whence Mr. Smith brought three bunches perfect in colour and size of bunch and

berry. These were from a Vine grafted on the Muscat of Alexandria, and were ripe as long back as the first week in August last. It is almost needless to say that a cultural commendation was awarded. Apples and Pears in one hundred varieties came from Belvoir Castle Gardens, both colour and size being conspicuous. From Jersey came some superb fruits of Doyenné du Comice and other Pears, as well as some good-looking Apples. Vegetables were conspicuous by their absence on this occasion.

Orchid Committee.

First-class certificates were given to the following:—

Cypripedium Marchioness of Salisbury.—A hybrid between C. bellatulum and C. barbatum superbum. Certificates have been awarded to plants from this particular cross on no less than three previous occasions, the varieties being C. Charles Richman, C. Charles Richman var. Meteor, and C. Leysmianum. The plant now certificated differed from those principally in its longer and somewhat more drooping petals, which are paler in colour and more evenly spotted with chocolate-brown. The dorsal sepal is greenish white at the centre, tinted with rose towards the top, lined and spotted with chocolate-brown; lip brownish purple, shading to greenish rose. From Messrs. F. Sander and Co.

Cypripedium Milo grande.—An extra large, finely-shaped flower, the result of crossing C. insigne Chantini with C. œnanthum superbum. The dorsal sepal is greenish, thickly spotted with brown in the centre, the top having a broad white margin; the petals and lip dark brown. From Messrs. J. Veitch and Sons.

Lælio-Cattleya callistoglossa ignescens.—A cross between Cattleya gigas Sanderiana and Lælia purpurata. Sepals and petals rose, sepals dark crimson in front, having two distinct yellow blotches in front of the throat. The principal distinction from the original is the extra dark colouring on the lip. From Messrs. Veitch and Sons.

Luddemannia triloba, in which the sepals are bright yellow, tinted with brown, and the petals yellow, spotted brown. The three-lobed lip is bright lemon-yellow, the flower-scape pendulous, 3 feet long. From Sir. T. Lawrence, Bt.

Awards of merit were given to the following:—

Cattleya labiata Miss Clara Measures.—Sepals and petals white; lip white, lined throughout the throat, and with a light blotch on the lip rose-purple. From Messrs. F. Sander and Co.

Cattleya Lady Ingram (Cattleya Eldorado × C. Dowiana aurea).—The sepals and petals, creamy white, lip rose-pink lined with a deeper shade in front, having an orange-yellow throat. The plant, though small, the seed having been sown in 1888, carried three fine flowers, which are in the way of those of Cattleya Hon. Mrs. Astor. From Mr. C. Ingram.

Lælio-Cattleya Othello (C. maxima × L. elegans Turneri).—The sepals and petals are bright rose, lip rose lined with crimson, margined with white. From Mr. C. Ingram.

Cattleya Cecilia (C. Lawrenceana × C. Trianæ).—This in shape is like a Cattleya Lawrenceana; sepals and petals lilac, lip of the same colour, with a slight crimson blotch in centre. From Mr. C. Ingram.

Lælio-Cattleya Semiramis (C. Gaskelliana × L. Perrini).—The general character of the plant partakes largely of L. Perrini; sepals and petals rose-purple, lip lined and blotched with rosy purple. From Messrs. Veitch and Sons.

Cypripedium Pollettianum (Burford variety).—An extra fine form, the flower larger than in the original and showing more of the œnanthum parent in the dorsal sepal. From Sir Trevor Lawrence.

Messrs. J. Veitch and Sons had a fine group, amongst which, besides those referred to above, were Cypripedium Arthurianum, C. Mimosa, a fine variety of C. Niobe, Epidendrum Wallisiociliolare, Cypripedium Ianthe, Lælio-Cattleya Decia, Cattleya Dowiana aurea, Miltonia Moreliana, Cypripedium Phædra, Lælio-Cattleya Pallas, Cypripedium œnanthum superbum, Phalænopsis Vesta, Cattleya O'Brieniana, C. Bowringiana, Zygopetalum Klabochorum and Cattleya leucoglossa (silver Flora medal). A silver Banksian medal was awarded to Mr. T. Statter, Stand Hall, for a fine group of cut flowers, principally Cattleyas, including C. Dowiana in variety, several fine forms of C. labiata and C. Bowringiana, Cypripedium vexillarium, C. Edwardi and various forms of C. insigne montanum were also shown here. Messrs. F. Sander and Co., St. Albans, sent a choice group, consisting of Cypripedium insigne montanum in variety (showing the yellow and dark forms), Cymbidium Winnianum, Cœlogyne fuscescens (a fine plant with three spikes), Sophronitis grandiflora, a fine form of Lycaste Skinneri, Habenaria Susannæ (a made-up specimen with ten fine spikes), Calanthe Clive, Cattleya labiata in variety (including Miss C. Measures), Angræcum polystachyum, Dendrobium album, Trichopilia brevis with two flowers, Anæctochilus Petola, and a new form called Sanderianus; also Saccolabium acutifolium, the flowers borne in clusters of twelve to eighteen. The sepals and petals are brown, lip white, with brown spots in centre. Messrs. B. S. Williams and Son received a silver Banksian medal for a small, but choice group, prominent amongst which were Pescatorea Roezli rosea, P. Klabochorum superba, Cypripedium Harrisianum superbum, C. Pitcherianum (Williams' var.), C. Adonis superbum, C. insigne Wallisi, Miltonia Roezli and Cœlogyne Gardneriana, an old species with pendulous spikes of white flowers. Mr. F. W. Moore, Glasnevin, sent Phalænopsis denticulata, the flowers creamy white, barred with brown; Spathoglottis pubescens, a small yellow-flowered species in the way of S. Fortunei, and Eriopsis rutidobulbon. Mr. Measures, Cambridge Lodge, Camberwell, sent Cypripedium Olenus, Masdevallia abbreviata (like a white form of M. polysticta), Pleurothallis longissima, in the way of P. rubens, but with larger flowers and longer spikes than that species. Mr. J. Gurney Fowler sent a spike of the rare Cymbidium Traceyanum, carrying twelve fine flowers.

Floral Committee.

A first-class certificate was given to—

Dracæna latifolia, a handsome broad-leaved kind, which will be much valued for the conservatory. Its leaves are of great texture, nearly a yard long, arching outwards and prettily undulated on the margins. They are of a deep shining green colour, distinctly edged with a lighter, almost white tint. Plants of various sizes were shown. It came from Mr. W. Last, gardener to Mr. H O'Hagan, River House, Hampton Court.

Awards of merit were given to—

Chrysanthemum Clinton Chalfant.—A reflexed yellow-flowered variety of American origin, and an acquisition by reason of its great decorative qualities. The flowers are not too large, but in colour are very rich and clear. A plant was also shown about 4 feet high carrying a dozen or more flowers. It was shown by Mr. W. J. Godfrey, Exmouth, Devon.

Chrysanthemum Annie Heard.—A single-flowered kind, free and graceful, bearing many-flowered sprays, the blooms not large, but broad-petalled and of a pure white colour. This also came from Mr. Godfrey.

Chrysanthemum Arona.—This is a handsome incurved Japanese, large and full, and in some degree resembling Col. W. B. Smith, especially in colour, which is deep buff-yellow, glowing with a brighter tint towards the base of the petals. It was shown by Mr. H. Briscoe-Ironside, Burgess Hill, Sussex.

Chrysanthemum Oceana.—An incurved Japanese, bold, but not coarse, with broad petals, and of a clear, soft canary-yellow colour, shading to a deeper lemon-yellow. Shown by Messrs. H. Cannell and Sons.

Chrysanthemum Vicar of Bray.—An English seedling of the Japanese class, with a graceful reflexing form, the petals curling and intermingling prettily. It is of a rich bronzy buff colour, orange shaded in the centre, and with fawn-yellow reverse. It was shown by Mr. R. Owen, Maidenhead.

Chrysanthemum Robin Adair.—This is of the Anemone-flowered type, large and shapely, the centre florets lilac-pink, shaded with yellow, the ray petals blush-white, flushed with lilac, more especially on the reverse. Also from Mr. R. Owen.

Chrysanthemum Mrs. R. C. Kingston.—This belongs to the true incurved class, and has a very large, high, shapely flower, the reverse of the petals being a deep lilac-rose, but inside they are of a clear blush shade. This also came from Mr. R. Owen.

Rhododendron Numa.—This is a fine hybrid of complex parentage, but partaking of the R. javanicum character, and a welcome addition to the ever-flowering family of greenhouse Rhododendrons. Its habit of growth is good, and the flowers are of a rich telling shade of orange-red, shading towards crimson in the tube. Shown by Messrs. J. Veitch and Sons, Chelsea.

Pentstemon Cobæa.—Several fine plants of this handsome species, which comes from Texas, were shown. It has large, broad, deep green leaves arranged all up the stem in opposite pairs. The flowers in size, shape and disposition resemble those of the best garden kinds of the present day. They are of a pale mauve colour, streaked with a deeper tint in the throat and shading to white in the lobed petals. It was shown by Mr. Bain, gardener to Sir Trevor Lawrence.

Polystichum constrictum.—A distinct hardy Fern, the result of crossing P. aculeatum and P. angulare. It has narrow, tapering, erect fronds of a deep olive-green colour, arranged somewhat regularly around the central cone. It was shown by Mr. W. Marshall, Auchinraith, Bexley.

From Messrs. H. Cannell and Sons came a large collection of Chrysanthemums in show, single and decorative varieties. M. P. Dewolfs, yellow; T. Wilkins, buff; Reine d'Angleterre, rose; Sir E. T. Smith, yellow; Oceana, yellow, with bold, broad petals; Duke of York, and Philadelphia were the finest Japanese kinds. The thread-petalled varieties were represented by some charming kinds, notably Mrs. Filkins, yellow; Silk Twist, white, tipped with pink; Centaurea, yellow, and Piper Heidseick, white. Single Pelargoniums also from Swanley were brilliant, rather formally bunched, but prettily arranged on a groundwork of Maiden hair Fern. Enid, soft red; Delicatum, mauve-pink; Donald Beaton, scarlet; Duke of York, dark crimson; Mrs. Hall, salmon; Snowdrop, white; Rev. Bartram, crimson; Lord Farrer, light red, and St. Cecilia, rich salmon, represent a good selection from a lovely lot. This exhibit was a welcome one, well showing that the Chrysanthemum is not the only fine flower of the present time. It would be well to moderate the Chrysanthemum craze and give more attention to zonal Pelargoniums for winter flowering. A silver-gilt Banksian medal was awarded. Mr. G. Wythes, gardener to Earl Percy, Syon House, showed eighty varieties of cut Chrysanthemums arranged in a charming, graceful way, the flowers on long stems rising out of a bed of Maiden-hair Fern. Among the best flowers we noted Hairy Wonder, Eda Prass, Viviand Morel, W. H. Coles, Florence Davis, G. C. Schwabe, W. Seward, Robert Owen, Mme. Darrier, D. B. Crane, with Jane and Miss Mary Anderson, two of the most charming single-flowered varieties to grow for cutting. A silver Banksian medal was awarded. Mr. T. S. Ware showed Chrysanthemums in quantity, chiefly cut blooms, well arranged with Crotons, Ferns, and Grasses. The best flowers were those of Rose Wynne, Mme. Rozain, Golden Gate, Niveum, Amiral Avellan, and A. H. Fewkes, the last a deep rich yellow incurved. The award was a silver Banksian medal. Mr. Pentney, gardener to Mrs. Howard, Isleworth, received a bronze Banksian medal for a little group of cut Chrysanthemums prettily arranged with Asparagus and Ferns. Mr. W. J. Godfrey, Exmouth, who was

awarded a silver Banksian medal, showed several of the newer varieties of Chrysanthemums finely, notably Reine d'Angleterre, Wilson Addison, Mrs. G. West, A. D. Chattin, Cecil Wray, King of Yellows, a large incurved yellow, and Mrs. Hume Long, rose amaranth, long-petalled, partially quilled; Mr. W. J. Godfrey, white and hairy; and Clinton Chalfant, reflexed yellow, described above. Mr. R. Owen sent several new kinds, as Robin Adair, Mrs. R. C. Kingston, Vicar of Bray, already described, and G. Haigh, rosy buff. A beautiful sport from R. Petfield; John Lightfoot, blush white, edged with lilac, and others. A bronze Banksian medal was awarded Mrs. Jones, Greenford Place, Sudbury (gardener, Mr. Jones), for a group of fifteen varieties of single-flowered Chrysanthemums—Jane, white; Mary Anderson, blush; Rev. Henfrey, amaranth-crimson; Princess May, dark crimson; Jane Wells, lilac-pink; Purity, white; and Edwin Weller, pale buff, being the best. Mr. Goble, Walcot Nursery, Isle of Wight, showed six plants of a dwarf, free-blooming, single white-flowered Chrysanthemum named Ewan Cameron. Plants and cut flowers of Chrysanthemum Philadelphia were shown by Messrs. B. S. Williams and Son, but the committee passed the variety, and its comparative failure in the hands of all who have had it proves the necessity of an independent trial before making a high award to an unknown, untried novelty. Mr. Slogrove (gardener to Mrs. Crawford, Gatton, Reigate) exhibited two very fine stands, each of a dozen grand blooms of Chrysanthemum Thunberg and C. Mlle. Marie Hoste. Mr. H. Briscoe-Ironside also showed a pretty series of new varieties; and from Mr. Owen Thomas, Royal Gardens, Frogmore, came a plant over 6 feet high of Princess Ena, a pretty hairy kind of a distinct pink colour, which received an award of merit last year. Messrs. J. Veitch and Sons showed a charming selection of their Rhododendron javanicum forms, also the original species and earlier hybrids, thus showing the marked advance that has been made. Some of the best were Primrose, yellow, pure in colour and very fine in flower; Taylori, rich pink; Ruby, deep red; Ajax, light red; and Maiden's Blush.

Fruit Committee.

The exhibits before this committee, though less numerous than at previous meetings, were notable for their excellence, the Pine-apples from Frogmore and hardy fruit from Belvoir being very fine. From the Royal Gardens, Frogmore, Mr. O. Thomas sent eighteen very fine Smooth Cayenne Pines, all good and beautifully finished, with very small tops. This exhibit was much admired, and well merited the silver-gilt Knightian medal awarded. Mr. Divers, Belvoir Castle Gardens, Grantham, staged a very nice collection of Apples and Pears—100 dishes in all—the Pears being specially good. The fruits were staged with berries and foliage, thus adding to the effect. Mention must be made of such varieties as Blenheim Orange, Lady Henniker, King of the Pippins, Cockle Pippin, Bramley's Seedling, Bismarck, Beauty of Kent, Cox's Pomona, Peasgood's Nonsuch, Frogmore Prolific, and Annie Elizabeth, all notable for their colour and finish. The best Pears were Marie Louise, Winter Nelis, Beurré Rance, Beurré Sterckmans, Glou Morceau, Easter Beurré (very good), and Maréchal de la Cour (silver-gilt Banksian medal). Mr. H. Becker, Imperial Nurseries, Jersey, sent a smaller collection of fruit, including good dishes of Cox's Orange, King of the Pippins, Blenheim Orange, Winter Calville, Flower of Edinburgh, Scarlet Pearmain, with other well-known varieties. He also staged nice-looking fruits of Crimson Seedling, Scarlet Pippin and Golden Nonpareil Apples. Good Pears in twelve varieties were likewise sent (silver Banksian medal). Mr. Smith, Mentmore Gardens, Leighton Buzzard, sent three very fine bunches of Chasselas Napoleon Grape from Vines grafted on Muscat of Alexandria, the berries large, of a beautiful amber colour, perfect in shape and well flavoured. Messrs. Rivers and Son, Sawbridgeworth, Herts, sent Apples Rivers' St. Martin and Rivers' Codlin, nice-looking fruits and of good quality. Messrs. Veitch, Chelsea, sent new Apples Welsh Beauty, Reinette de Damson and Fraise de Hoffinger, but the cropping qualities could not be judged from the single dishes sent, though the fruit promised well as regards appearance. Mr. L. E. Thomas, Berkhamsted, sent seedling Apple Eureka. Mr. Ray sent a seedling Apple named Ivanhoe. The Rev. J. R. Drummelow, Chard, sent bunches of Black Hamburgh Grapes ripened out of doors and in excellent condition as to size and colour. Mr. McIndoe, Hutton Hall Gardens, Guisborough, Yorks, sent a new Pear, Charles Ernest, a nice-looking fruit. Mr. Thomas, Frogmore, sent a new Plum, Frogmore Late, a nice-looking black variety.

The lecture by Dr. M. T. Masters was on substitutes for Larch. He dealt briefly with the Larch disease, which it was found impossible to stamp out, and therefore he thought an efficient substitute should be found. The chief and first requisite was something cheap that quickly produced good timber. He found on looking through the lists there was plenty of substitutes, but there was a difficulty in finding sufficient stock of them in nurseries. He thought the Corsican Pine was the best substitute, using for comparison the table of values given in the conifer conference report, taking Scotch Fir as the standard. The Weymouth Pine, introduced to Longleat in 1700, was not found first-rate, but he believed Nordmann's Silver Fir was one of the very best timber trees we were likely to have, better even than the Silver Fir. As regards the Douglas Fir, it was not adapted for exposed positions, but altogether was a tree to be recommended, putting on timber very quickly. He would give it second place, as the quality of its wood left nothing to be desired. Almost equally good was Menzies' Spruce, which grows very fast, and there is a magnificent wood of it in Kent. The Redwood he would also recommend, and it was well adapted for coppice wood. Among newer things Lobb's Cypress was of the greatest promise for the future. Lawson's Cypress in America has the highest character as a timber tree, and he thought it would if grown thickly be a most efficient substitute for Larch. Even better would be the Nootka Sound Cypress, which is never likely to be hurt by cold. Abies brachyphylla from Japan would be found a good tree in the future, and there were many more worth growing, though less useful as timber trees. For seaside planting there was nothing better than Cupressus macrocarpa. The lecture was well received by a good audience and some discussion followed.

NATIONAL CHRYSANTHEMUM SOCIETY.

The floral committee of this society held a meeting at the Royal Aquarium on Monday last, when Mr. T. Bevan occupied the chair. Several good exhibits of single-flowering varieties were presented to the committee, some of which secured high honours—a comparative rarity in these days of big bloom worship. There was a large number of exhibitors, and the principal collections came from Messrs. Cannell and Sons, Mr. Godfrey, Mr. H. J. Jones, Mr. R. Owen, Mr. W. Wells, Mons. Ernest Calvat, Mr. Briscoe-Ironside, Mr. C. E. Shea, &c. First-class certificates were awarded to the following—

Chrysanthemum Dolly.—A pretty little pompon commended by the committee last season. It is of reflexed form, with rather broad florets, colour deep yellow. It was raised and shown by Dr. Walker, of Wimbledon.

Chrysanthemum J. Lightfoot.—A Japanese of medium size, florets notched and spreading, ground colour white, suffused and edged pale lilac. From Mr. R. Owen, of Maidenhead.

Chrysanthemum George Haigh.—A sport from Robert Petfield; colour carmine-rose, shaded gold. Also from Mr. Owen.

Chrysanthemum Mrs. H. Weeks.—Six large blooms of this were staged. It is a Japanese with very broad florets, curly and intermingling, building up a very deep massive flower; colour pure white, tinted blush. This was exhibited by Mr. H. Weeks.

Chrysanthemum Major Bonaffon.—An incurved of pyramidal form, and having a mass of narrow pointed florets; colour a very pure pale yellow. Four exhibitors staged this variety, but the award was made to Mr. W. Mease, whose blooms were finest and deepest in build.

Chrysanthemum Mrs. A. E. Stubbs.—A pretty single Japanese, with long, narrow pointed florets, centre yellow. From Mr. H. J. Jones, of Lewisham.

Chrysanthemum Mrs. George West.—This, although a Japanese incurved, was almost as solid and regular as one of the old type. It is very large and the colour velvety amaranth inside, with a reverse of silvery pink. Another of Mr. H. J. Jones's varieties.

Chrysanthemum Oceana.—A colonial seedling Japanese incurved of great promise. The florets are very broad, deeply grooved and heavily incurving. The colour is pure golden yellow of great purity. Shown by Messrs. H. Cannell and Sons.

Chrysanthemum Arona.—Japanese with narrow pointed florets, somewhat incurving and pointed at the tips. The inside colour is reddish crimson or chestnut, and the reverse, wax-like golden yellow. A new seedling from Mr. Calvat called Vicomte René de Chezelles was almost identical in every respect; Arona, however, being presented first secured the award. Mr. Briscoe-Ironside was the exhibitor.

Chrysanthemum Clinton Chalfant. — An attractive reflexed Japanese of American origin, very pure yellow. Shown by Mr. Godfrey.

Chrysanthemum Annie Heard.—A pretty little single, yellow centre, surrounded with short flat florets of pure white. This, too, came from Mr. Godfrey.

Chrysanthemum Baronne de Buffières.—Japanese incurved, round and solid in form, florets of medium size; colour pale lilac, reverse pearly pink. From Mr. W. Wells.

Chrysanthemum M. Chenon de Leché.—A fine reflexed Japanese flower commended by the committee last year. Very long florets of medium width, colour primrose-yellow shaded salmon-bronze, outer florets shaded rosy bronze. Also from Mr. Wells.

Chrysanthemum Mlle. M. A. de Galbert.—A large white Japanese with long drooping florets. Another of Mr. Wells'.

Chrysanthemum Le Moucherotte.—A monster show bloom with long narrow florets, very full and double, a Japanese variety; colour pure yellow, tinted bronze. This, too, came from Mr. W. Wells.

Chrysanthemum Ewan Cameron.—A single-flowered Japanese with flat florets, yellow centre. Shown by Mr. E. C. Goble.

There were many other noteworthy varieties—Harold Wells, a pale primrose incurved Japanese, being very fine; Australie, a large colonial-raised seedling, will be heard of again. Rêve d'Or, golden yellow, and Vicomte René de Chezelles were the finest in M. Calvat's exhibit, and are both very promising. Others, such as King of Yellows, Lady Ridgway, Mrs. C. Orchard and Mrs. Hume Long in the Japanese section, will no doubt be heard of again. The committee wished to see the following again: L'Améthiste, a rosy amaranth incurved; Wm. Bolia, a brightly-coloured Japanese of a somewhat similar shade; Duchess of Fife, large white Japanese incurved; Mrs. Hepper, white incurved; Mayor of Exmouth, Mrs. W. J. Godfrey and Harold Wells.

The weather in West Herts.—During the past week the weather has been very warm, wet, and windy. On each day the temperatures both during the daytime and at night have been above the average for the time of year. On two days the highest reading in shade exceeded 58°, while on three nights the exposed thermometer never fell lower than 45°. At 1 foot deep the tempera-

ture of the ground is at the present time about 1° in excess of the November average. Rain fell on each of the nine days ending the 10th to the aggregate depth of nearly 2½ inches. Since the beginning of the month over ten gallons of water have passed through the 2½ feet of soil in my percolation gauges, which are a yard square, thus showing how wet the soil has now become. On the 10th the wind towards night became very high, the mean velocity for the hour ending midnight amounting to thirty-one miles, and during some of the individual gusts it was blowing a "fresh gale"—direction south. On seven days this month no sunshine at all has been recorded, but the remaining days, on the other hand, have been tolerably bright for the time of year.—E. M., *Berkhamsted.*

Notes of the Week.

Ipomæa ternata, a South American climbing plant, has now some fine clusters of buds and blooms upon it in one of the plant stoves at Kew. The clusters of prominent inflated-looking buds give it a distinct appearance, and standing out conspicuously from their enlarged calyces, they expand into fine large blossoms of the purest white, the petals so thin as to be almost transparent. It twines about like the Stephanotis, but is deciduous.

Cattleya labiata alba.—Pure white forms of this late flowering Cattleya that combine shapely form and good breadth of petal with perfect purity of colour are not frequently met with. We saw one such in flower at St. Albans, the petals being of fine width, and there was not the faintest flush of any colour to tinge the spotless whiteness of either sepals, petals, or the front of the labellum. The tube of the flower inside was of a soft yellow, which rather added to the charms of the variety.

Laportea morioides (the Poison Tree of Queensland) may now be seen fruiting freely in one of the divisions of the T-range of houses at Kew. The plants here are comparatively small. They have each a single erect stem clothed with large heart-shaped leaves, whose surface is covered with bristly stinging hairs. The flowers are inconspicuous, but are succeeded by berries that look sufficiently tempting to induce one to try them. The fruits are like a small Mulberry, of a dull red colour, and borne in slightly branched clusters, each having about twenty.

Tillandsia latifolia is a brilliant and beautiful species, deserving more attention if we may judge from a group of it in one of the houses at St. Albans. The plants were planted out on a raised bed and they were most attractive both in leaf and bloom. The leaves are long and droop like those of Yucca flaccida. They are deep green, spotted all over their upper surface with a mealy whiteness. The flowers, borne in a long erect spike, which rises well up among the leaves, are of a bright vermilion-red hue, a colour welcome at one of the dullest periods of the year.

Habenaria Susannæ.—A grand white-flowered Orchid that will eventually be generally grown and regarded as one of the finest blooming plants of the dull season is this Habenaria. We saw a great quantity of it in flower in Messrs. Sander's nursery at St. Albans, and its effect in groups was superb, the bold erect spikes rising up from a leafy base and bearing long heads of blooms, the flowers quaintly formed and of snowy whiteness. In its striking aspect it may be best compared with the Disa, but its value for present blooming is great, and must give it a prominent place among Orchids.

Begonia Rajah.—This is one of the prettiest and certainly one of the most distinct among the many pretty leaved Begonias. It comes from the country about Singapore, and is being sent out by Messrs. Sander, of St. Albans, where we recently saw a quantity of it. It has a dwarf habit of growth and leaves like those of the B. Rex varieties, but smaller. The colour is novel and exquisite, the main portion of the leaf being a deep bronzy green, much the same shade as pervades the leaves of Regner's Ivy at this time, and from this the venation stands out peculiarly prominent, the main veins being plainly delineated in a bright tone of yellowish green.

Wyedale Plum.—On October the 29th Mr. Wythes exhibited the above Plum in the collection of fruit staged by him at the Drill Hall meeting of the R.H.S. The Plums appeared in such a fresh, clean condition, that one would imagine they were only just ripe, proving the value of the variety as a late sort that will hang on the trees in good condition for a considerable time after the fruit is ripe. I have grown this variety in several counties, and always found it a moderate and continuous bearer, and one of the latest for use both for cooking and dessert. If it had been as large as some of our more showy Plums, it would ere this have been known in almost every garden of any extent, but as it is rather small in size, its merits have not been generally recognised.—W. G. C.

Asparagus crispus is the name under which Messrs. Sander grow in great quantity a lovely and graceful species that we have seen elsewhere as A. decumbens. It appears to be synonymous with the A. Sprengeri of Continental nurserymen. The trio of names is confusing, but it is important that all should know and grow this species. We have seen some fine plants of it in hanging baskets, notably in the conservatory at Warley Place, but in the St. Albans nursery a new use is found for it, namely, to drape the fronts of stages along with Panicum variegatum. In one instance the beauty of a lot of Cattleya labiata in fine flower was enhanced by a front margin of this Asparagus and Panicum arranged alternately.

Acer Lorbergi.—A most distinct and handsome Maple under this name was sent to me many years ago by the late Louis van Houtte, of Ghent, and, being of a vigorous habit of growth, has now developed into a fine tall specimen. Its greatest merit, however, consists in the specially brilliant autumn colouring which its foliage assumes at this time of year, when every leaf becomes a clear canary-yellow, making the tree an extremely conspicuous and beautiful object in the shrubbery, and well worth planting by any lover of distinct and beautiful foliaged trees. I do not find this name recognised in the "Index Kewensis," so that it may be known also under some other name at Kew. I enclose a leaf for your inspection.—W. E. Gumbleton.

Chrysanthemum Philadelphia.—This variety, as seen almost everywhere this season, must, in my opinion, be regarded in the light of a disappointment. I remember some years ago a few blooms of Louis Boehmer being sent from America. In that case the petals were broad and stout, but under English cultivation they assume very narrow proportions. In the case of Philadelphia much the same complaint can be made. The blooms sent here last season were fine, solid, massive-looking, and quite different from those grown in this country during the present year. And as to the colour, instead of its being a pure white, faintly tinted primrose or sulphur, I have not seen a single bloom that could be compared with the American-grown examples. All those at the large trade displays and those shown at the Aquarium were distinctly yellow in colour.—Chrysanth.

Orchids at Kew now in flower are sufficiently numerous to give to the house devoted to them much welcome colour in the dull, cheerless days. About a dozen plants of Cattleya labiata down one of the side stages in the cool division are well flowered, and C. Bowringiana is represented by several good pieces, the finer spikes having each ten flowers upon them. The ever-welcome Cypripedium insigne makes a graceful bank at the end of the central stage. C. Spicerianum still has fresh flowers, and C. Pitcherianum, with its short broad sepals and petals and blunt, much-inflated pouch, is a very distinct form. Lælia Eyermanniana in tender mauve, shading to lilac and soft purple, is a delightful and uncommon species now carrying a good raceme of blooms; whilst the brilliant Sophronitis grandiflora, so vivid in colour, never fails to arrest attention when in flower.

Dracæna Godseffiana was noted in great numbers in the St Albans nursery. It is free in growth, easy of increase, altogether unique among Dracænas alike in habit of growth and variegation, and certainly a plant that will be extensively grown in the future. It is more like an Arundinaria than a Dracæna, sending up cane-like shoots, the branch arrangement more or less in whorls, while the leaves much resemble those of a hardy Bamboo. In lovely colouring of the foliage, however, there is nothing like it among plants grown under glass. The leaves are quaintly blotched and spotted with yellow on a shining deep green ground, after the manner of those of the variegated Aucuba. It further adds to the value of this Dracæna that its long shoots can be cut for use in decoration, as they stand well and there is no loss of plant, many shoots arising from an underground culm.

Byford Wonder Apple.—This new Apple is apparently justifying all that was said in its favour a year or two ago in The Garden. Numerous growers who purchased small trees worked on the English Paradise have recently shown me very fine fruit from trees only planted a year ago. At the Hereford fruit show some splendid dishes were staged from small trees, and so far the vigour and constitution of the variety leave nothing to be desired. No doubt next year it will come to the fore more than it has yet done, as the shoots are well furnished with bold fruit buds; not only so, but the trees being larger more fruit will be produced. Evidently some of our leading nurserymen have formed a very high opinion of its value, as they are working up large stocks to meet the anticipated demand. We have far too many varieties of Apples, but there is yet room for more of the Byford Wonder stamp, which combines great size, excellent cooking qualities, and the merit of keeping sound until March.—W. G. C.

Carnations in Savoy.—Miss Willmott, writing to us from Aix-les-Bains on October 25, says, "Carnations are as lovely as ever; masses of bloom and the whole air round scented by them. They consist of all kinds of Carnations, English, French, and German, from Hochard, Benary, Heinemann, and a great many from the Lyons growers. We take about 10,000 of our own cuttings in the autumn and keep in frames until the spring, and then plant out. We sow seed from wherever we can get it, including our own. We buy in from Lyons, Germany, &c., and plant out now. So you see we have all kinds and treat them in many different ways, and they all bloom equally well; different treatment seems to have no effect upon the way they bloom. We pick basketfuls of Carnations, flowers and buds, and the grass is so lovely. We have a large quantity of Marguerites, Venetian and French, and there are such lovely colours among them and such good flowers, as well as such delicious scent."

A garden without a gardener.—The council of the Royal Botanic Society having decided to dispense with the services of a garden superintendent, Mr. Coomber will therefore be open to a re-engagement.

BOOKS RECEIVED.

"The Potato in Field and Garden." By W. J. Malden. *Mark Lane Express*, 150, Strand, W.C.

"Mosses and Ferns." By Douglas Houghton Campbell, Ph.D. London: Macmillan and Co.

Names of fruit.—*J. E. D.*—1, Passe Colmar; 2, Hessle; 3, Fondante d'Automne; 4, Apple, small King of the Pippins; 5, Glou Morceau.——*Mrs. Greenwell.*—Pears: 1, Emile d'Heyst; 2, Souvenir du Congrès; 3, Beurré Bosc; 4 and 5, Beurré Clairgeau.

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"This is an Art
Which does mend Nature: change it rather; but
THE ART ITSELF IS NATURE."—*Shakespeare.*

ORCHIDS.

LÆLIA ANCEPS.

THERE is no more useful winter-flowering Orchid in existence than this beautiful and well-known species. It is plentiful enough to be always cheap, very constant and free-flowering, and one of the easiest of Orchids to manage. It is, moreover, a very variable kind, and if a good stock of plants is grown, the flowering season extends over a period of several of the dullest and most cheerless months in the year, the bright and pretty blossoms having a very telling effect when interspersed with Maidenhair and other Ferns in winter groups in the conservatory. The flowers open at a time when the plant has quite finished its growth, and therefore the dry atmosphere necessary to conserve them is not so injurious to its health as in some other kinds that are flowering and growing at the same time. Very soon after the blossoms fade the new growths appear at the base of the pseudo-bulbs, and on this account the repotting or surface dressing that is usually needed once a year should be early attended to. L. anceps may be grown in a variety of ways to suit the fancy of individual growers. The plants have a very natural and striking appearance when in blossom if grown on large, rough pieces of Apple or Pear wood with the bark retained and a thin layer of Sphagnum Moss about them. An advantage accruing from this mode of culture is that the rhizomes as they extend do not carry the roots out of the reach of the compost as they do in pots or baskets, for the Sphagnum may be added to if necessary until the pieces of wood are covered, and this, of course, without disturbing the roots. Baskets may also be used, but the erect spikes of bloom do not look so well as those of a pendulous habit under the circumstances. Pots or wide, shallow pans are the most usual receptacles, and, all things considered, are probably the best, the plants being more readily attended to as regards watering and more easily moved about for cleaning and examination. They should be large rather than small in regard to the size of the plants, as this admits of their being left for at least three years in the same pots, the surface only being renewed annually. With these wide pots only a thin layer of compost will be needed, so the drainage may be placed right up to within an inch or so of the rims. The usual peat and Moss mixture, of good quality and in a rough and open condition, may be used, and plenty of charcoal or potsherds must be added as the work of potting is in progress. Very often the roots will have obtained a firm hold of both the inside and outside of the pots, and these must not be disturbed more than necessary, as they are usually the strongest and healthiest of all, being the last set produced. The pots must be broken and the pieces with roots attached placed in the new ones. If large pieces of the pots come away it will be necessary to place them down among the drainage, filling up around with crocks after the plants are placed in position, carefully avoiding breaking the roots in the meantime. A much less satisfactory state of affairs is when many of the roots, through growing in a close, heavy, or waterlogged compost, have perished, the remainder being weak and unhealthy. Here the only thing to be done is to retain a few of the best of them to hold the plant in position and cut away all the rest, using a smaller pot than usual and mixing more Sphagnum and potsherds with the compost. In all cases where possible the leading pseudo-bulbs should be kept well back from the rims by pegging down, or, if the plants are healthy, notching the rhizome so that it may be bent in the direction desired. The pseudo-bulbs must be kept rather above the rims, the compost bedded around them firmly, and all ragged ends neatly trimmed off. They may be placed in the cool end of the Cattleya house, or in a temperature intermediate between this and that of the cool house. In either position they will do well provided they are not unduly shaded and have abundance of fresh air moving about them summer and winter.

While root and top growth are both active few Orchids require more water if potted as described above, but after the pseudo-bulbs are fully matured very little will suffice, only enough in fact to keep them plump. The leaves and bulbs are apt to become infested with white scale, and this if allowed to make headway soon spoils the appearance of the plants. Sponging with warm soapy water is the best remedy, and this should be resorted to very frequently until a complete riddance is made of the insects. L. anceps is an old species in cultivation, having first flowered in England more than sixty years ago. It is a native of Guatemala and Mexico. The typical flowers are each about 4 inches across and borne on erect spikes containing from two to five. The sepals and petals are deep rosy mauve, the lip bright purple, with white and yellow markings. The earliest flowers opened with me on the last day of October. Among the many fine varieties may be named

L. ANCEPS AMESIANA, a superb, nearly pure white variety, very lightly suffused with a delicate blush-pink, becoming more marked towards the tips of the sepals and petals. The latter are very broad and of great substance, the lip being pure white on the side lobes, the centre one purple.

L. A. ALBA when true is of the purest white, with no trace of any colour save a single yellow marking on the lip. But many varieties sold as alba are not pure white, and it is only by purchasing plants in flower that the true type can be ensured. This and several other white kinds are said not to flower so freely as the more highly-coloured forms, but this is often on account of their not being well established, plants that have a good hold of the compost usually blooming freely.

L. A. BALLANTINIANA is a choice and rare form with large flowers, very full, and with broad, handsome segments. The colour throughout is a very pale rosy white, the lip having the usual crimson-purple streaks on the side lobes and a purple blotch in front.

L. A. BARKERIANA is a somewhat smaller variety than many, but distinctly coloured. The sepals, petals and lip are all of them narrower than in the best forms, the ground colour being deep magenta, that of the lip being the most intense, with a yellow crest.

L. A. DAWSONI is a superb form, and though by no means new, has not appeared in many collections. The flowers of this variety are characterised by their pure white sepals and petals of great size and substance; the lip is also white, with lines of purple inside; the centre lobe is rosy purple margined with white. This is named after the late Mr. T. Dawson, of Meadowbank, in whose once-celebrated collection it first flowered.

L. A. DELICATA is a small, but prettily-marked variety, well worthy of attention on account of its distinctness. The sepals and petals are very pale mauve, the lip white, with the usually radiating lines of purple and a rich yellow disc.

L. A. HILLIANA is another of the white varieties, and a very fine one. It is not unlike the var. Amesiana, but the petals are, if anything, of a purer white. The plant is very vigorous in habit and produces much larger pseudo-bulbs than the type.

L. A. SCOTTIANA bears very large flowers with deep purplish segments, the lip being darker than in any other kind and having an orange-yellow throat. One of the most beautiful varieties of all is

L. A. STELLA, which has pure white sepals and petals, the lip yellowish, veined on the inside with deep purple and without the usual purple blotch.

There are many other varieties and new ones are being constantly added to the list, but enough have been mentioned to show the importance of this beautiful winter-flowering Orchid and its great value in keeping up a display. H. R.

ORCHIDS FOR WINTER FLOWERING.

DURING the dull months of November and December, when the borders outside are bare and but few occupants of the stove and greenhouse are in bloom, it is pleasant to enter the Orchid house and there find lovely flowers greeting one on every side. First amongst them we have Cattleya labiata and its varieties, which bloom so freely at this time of the year that no garden ought to be without some of them. Being of such dwarf compact habit, they may be grown in small pots; therefore a goodly number will only occupy a limited space. Lælia Perrini, L. anceps and its varieties are all good for winter flowering, and should be included in every collection. Amongst the Cypripediums there are so many good things, that it would be a difficult task to say which was best. The old C. insigne, however, is still a great favourite with most people, its flowers being cheerful and lasting such a long time in water. This is one of the easiest Orchids to cultivate, as it is not particular either to temperature or soil so long as plenty of water is afforded during the growing season. Then there are the Calanthes, so charming for cutting, or as pot plants intermingled with Asparagus or Adiantums. The old Zygopetalum Mackayi should on no account be forgotten, and though its flowers are not so attractive as those of some other Orchids, their delicate perfume is very pleasing. Oncidium ornithorrhynchum and its white variety are well adapted for making sprays, and as they flower so freely ought to be grown in quantity. Dendrobium Phalænopsis Schrœderianum, D. aureum and D. nobile are all grand plants for flowering during the winter and all are of very easy cultivation. Vanda Amesiana and some of the Pleiones may also be grown; the latter, however, are of little value for cutting. There are of course many others, but the choicest are not always the freest flowering; it is better, therefore, for those who have a quantity of flowers to produce to grow the more common varieties to ensure success. From those named above it will be possible to cut flowers all through the dull months. Many Odontoglossums may also be had in bloom. O. Rossi majus is a grand one for this purpose, and though its spikes are not large the plants flower freely, and being of such compact growth take up but little room. Some of the O. Alexandræ that flowered early last season and have been encouraged to grow, will now be sending up their flower-spikes; the most forward should be placed together at the warmest end of the house. Slugs are so fond of these, that they will travel a considerable distance to get at them. Much watchful-

ness and care will on that account be needed to preserve the spikes from their ravages. Thrips are also very troublesome at this time of the year, especially where the houses are not properly ventilated and plenty of moisture kept about the stages and paths. So far there has been but little necessity for fire-heat in the cool structures, as the requisite temperature could be maintained without it. With care and a little forethought there is no reason why the Orchid houses should not present a gay appearance even during these dull months. H. C. P.

DENDROBIUM DRACONIS.

None of the nigro-hirsute section of the genus Dendrobium is constant in the time of flowering, and this fine species, though it usually blooms in early summer, occasionally throws a chance flower or two in autumn. The flowers are not unlike those of D. Jamesianum, but the segments are narrow and more pointed. Although it is better in all cases to keep the plants of these hairy kinds to a proper annual routine of growth, it is not always advisable to force them to rest by means of a lower temperature or a lessened water supply. If new growths start they must be kept going, for suppression of these only means either the formation of others at a later date, which will be weaker, or the plants go blind, as it is termed, and refuse to start at all. D. Draconis is a fairly strong grower, and as a rule more amenable to culture than most of this group. It delights in a very high and moist temperature while making its growth and a position hugging the glass in a light house. While the growths are young the leaves are very apt to be scorched by bright sunlight, but if gradually inured to this, they will by the time the pseudo-bulbs or stems are nearing completion be able to withstand a full supply, only lowering the blinds, in fact, for about an hour in the middle of the day, closing the house early with abundance of atmospheric moisture, and raising the shading at the same time. This produces the kind of heat that tropical Dendrobes delight in and is fatal to red spider, their most troublesome insect enemy. This species does not thrive well if overburdened with compost, even large specimens doing best with a layer of about an inch. They may be grown either in pots or baskets, while some growers use large trellised blocks with the best results, on account of the freedom with which the air circulates about the roots. Two-thirds of Sphagnum Moss to one of the best fibrous peat will make the best compost for the roots, but abundance of charcoal, crocks, or similar material must be intermixed when placing in pots or baskets. The latter will not of course be necessary on the rafts, as the teak rods answer the same purpose. Being an evergreen species, it must not be over-dried after the growths are complete, but a lessened supply of water will of course be needed. Nor must the winter temperature rule below 50° for plants at rest, while if growing, 10° higher should be afforded. The flowers are produced from near the top of the last matured stems or pseudo-bulbs, which are from 9 inches to 1 foot in height, small at the ends and somewhat swollen in the middle. D. Draconis is a native of Moulmein, whence it was introduced in 1862.

Odontoglossum crispum roseum.—Several forms of this variety are now in bloom, and it is very interesting to note how the flowers vary, not only on different plants, but on the same one, and even in some cases on the same spike a good deal of difference exists. A very pleasing form I noted recently had the sepals broad and overlapping, being also fringed or toothed on the edges. These were wholly of a faint rose without any spot, and the lip had several spots of yellow. Other forms have a broad stripe running up the centre of each segment of a deeper colour than the rest of the flower. Indeed, there seems to be almost as much variation in these rose-coloured forms as in the ordinary white varieties, to which they form a most pleasing contrast.—R.

Odontoglossum tripudians xanthoglossum.—This is a distinct and pretty form of this old species, much deeper in colour than the type as usually seen, the lip being nearly covered with large purplish blotches. Some of the better forms of O. tripudians are certainly deserving of more attention than they at present receive, for not only are the blossoms large and rich in colour, but it is one of the freest blooming kinds in existence, rivalling even O. triumphans in this respect. It thrives well in the coolest house, and was introduced from Peru in 1869.

Oncidium barbatum. — This pretty little species is now in flower and worth a place in representative collections. The plant is of a tufted habit, with small, roundish pseudo-bulbs and leaves only about a couple of inches in length. The small flowers, produced on slender erect spikes, are bright yellow with brownish red spots on the sepals and petals. This plant does best suspended from the roof in a shady part of the Cattleya house, and should be grown in shallow pans of peat and Moss. A little of the surface of the compost should be removed annually and new substituted, this being preferable to frequent repotting.

Oncidium carthaginense.—Several newly-imported pieces of this Orchid are throwing up vigorous spikes, and a good deal of variation exists among the flowers. A pretty variety has flowers of a very pale purple, almost white, with many crimson spots and markings. It is a strong, healthy growing plant, and one of the easiest of all Orchids to grow or establish. Plants purchased last May have now filled their pots with roots and produced new leaves nearly as large as those preceding them, thus showing that the check given by their journey was only slight. It is a native of Honduras, and thrives well in the Cattleya house.

Stove and Greenhouse.

SICKLY PLANTS.

Over-potting is responsible for the loss of innumerable plants, and many more that are over-potted linger on, proving an eyesore to all concerned. Sometimes it is not so much a case of over-potting as of the use of unsuitable soil, or it may be the mixture is right enough, only the water used tends to cover it with black slime and to sour it. Some plants are repotted oftener than either desirable or needful; others are kept restricted at the roots and fail to take kindly to the fresh soil when given a shift, while many are repotted at the right time, only to be spoilt by careless watering afterwards. The question is sometimes asked, What becomes of the thousands of Indian Azaleas that are every year imported into this country from Belgium and elsewhere? Judging from my experience in different localities, they are widely distributed; most of them flower grandly the first season and never properly afterwards. Those who buy them from our nurserymen either overlook the fact or else are unaware that the majority of these plants are dug out of pits and frames and are potted by those to whom they are sent. It follows that the new soil is not occupied by the roots, and is not likely to be till after the flowering is over. There should, then, be no repotting or shifting of the plants by their new owners for at least one year, and, as a rule, they would do well in the same comparatively small pots a second year, always provided they were well attended to. In any case only small shifts should be given, and no transferring from 5-inch pots to any nearly three sizes larger. Nor ought they to be turned out of doors directly the summer appears to have arrived. After flowering they should if possible get more warmth than previously in order to develop fresh strong growths for flowering next season, and unless thoroughly well rooted ought not to be set outside at all. At the present time there are thousands of Indian Azaleas in a sickly plight owing to being over-potted and the soil overrun by worms. It is not the best time of year to repot Azaleas, but rather than leave the plants in such a plight I would prefer to clear them of the soured soil, retaining the original ball of soil and roots in its entirety, and placing in much smaller pots with a peaty, firmly packed compost. Azaleas ought never to become very dry at the roots, but those overpotted must be very sparingly watered, or the whole of the roots may quickly perish and the plants die. Camellias have gone out of fashion, but those who have them will do well to avoid over-potting and should give them some lime-water if worms are in the pots. Other hard-wooded greenhouse plants are becoming scarcer than ever, the rage being for plants that can be raised quickly and cheaply, and which are capable of affording abundance of flowers.

What a number of sickly Persian Cyclamens are to be seen everywhere. Every gardener seems to recognise the value of this class of plants, and grows a few or many accordingly, but only in a small number of cases successfully. Old corms are kept long after they can be made to produce good-sized flowers freely, while the young or one-year-old plants usually look lost in their pots. Young plants from the time the seed has germinated, and this should take place very early in the year, ought not to have a check given to them in any way—such for instance, as a few weeks in small pots on a dry, sunny shelf very often bring about, as no amount of skilful treatment will recover them from this. Throw those feeble plants away instead of trying for the next two years to grow them to the size they ought to have been within nine months of the time of sowing the seed. Chinese Primulas in larger pots than they can very well fill must be very carefully watered indeed, or otherwise they will rot off. Semi-doubles from seed are quite as easy to grow in an ordinary greenhouse temperature as are the single forms, but the old semi-doubles, propagated by means of cuttings or division, are not. It is an intermediate temperature that best suits these, and a shelf not far from the glass rather than a low staging with perhaps a variety of taller plants behind them. In low temperatures and large pots they are of little service, and gradually dwindle away. Kept in low temperatures and a badly root-bound state, Clivias present a starved appearance and flower unsatisfactorily; whereas they are much healthier when rooting in fresh soil, or say after large, old plants have been freely divided and each strong division given an 8-inch pot. I have tried what liquid manure would do for these starved plants, but it does not improve them much. It is in an intermediate temperature where the fewest mistakes are made with this beautiful class of plants.

At the commencement of October Crotons may be in excellent health, the foliage being fresh and well coloured, but by mid-winter the same plants are not unfrequently in a miserable plight. Fire-heat unaccompanied by a free use of the syringe or much moisture in the atmosphere favours the spread of red spider and thrips, and these quickly spoil the appearance of Crotons and also Dracænas. Timely gentle fumigations will keep down thrips. Very many Ixoras are

over-potted, and it is at this time of year when they show the ill effects of this the most. Healthy young plants strongly rooted, kept free of mealy bug and thrips and given plenty of heat, produce fine trusses of flowers up to mid-winter or later. Throw away the stunted sickly old plants and raise vigorous young stuff in their place. Keep Dipladenias, more especially those of the amabilis type, in a brisk heat and quite on the dry side at the roots. It is the over-potted, imperfectly ripened, and not well-rested plants that start into growth the least satisfactorily and are the most likely to remain in a sickly state. Dipladenia boliviensis is the most easily grown and flowers freely during the greater part of the year. Old plants in pots are apt to become stunted and unhealthy in appearance, also giving the smallest flowers, and young ones should be raised from cuttings to take the place of any two years and upwards old. That beautiful stove trailing plant Gloriosa superba is not often seen at its best. Too many err in placing the bulbs or tubers in large pots, and when they are seen during the growing season to be of a sickly hue, the chances are that not a healthy root fibre is to be found. Give the bulbs a good rest in a stove heat, start in smaller pots next spring, and avoid over-watering, especially at the outset. If Allamandas are starved at the roots they are anything but "things of beauty." They are coarse, hungry-rooted plants, and whether in pots, tubs, or small brick pits should be turned out just as they are breaking afresh after being hard pruned in February, have their roots reduced considerably, and be given the benefit of a good supply of fresh and fairly rich compost. Gardenias, though strongly scented, are yet much appreciated as button-hole flowers and such like, and pay for high culture. In a sickly, mealy bug-infested state they are not worth house room. Young plants do well in pots and older ones planted out. A narrow pit with bottom-heat pipes, peaty soil, strong heat, and moist atmosphere suits this class of plants well. If the soil sours, and it is very apt to do so when the watering-pot and syringe are so freely used, as they ought to be, turn out the plants, syringe all the soil from the roots, and replant in fresh compost. This may be done at almost any time of the year, the plants not suffering in the least. Keep mealy bug under by means of the syringe, using either clear water or weak soot water rather than sponging with strong insecticides. Eucharises are more often seen in a sickly state than in a healthy condition. If overpotted and the soil sour they will not thrive, and in order to restore them to a more satisfactory state shake clear of old soil and syringe the roots prior to repotting in fresh soil, and they will recover all the more quickly if the old leaves are cut off, this also getting rid of mealy bug if any exists on the plants. Either early in the autumn or in the spring is the best time for treating Eucharises in this way. They should have the benefit of brisk bottom-heat for a time, and must not be heavily watered at the outset. Very many plants, Eucharises included, get into a sickly state owing to the soil in the pots having been soured by the action of worms. Where hotbeds of either stable manure, leaves, spent tanner's bark, or any of them in mixture are formed, these materials decay quickly in much heat and moisture and soon become full of worms, some of the latter, as a matter of course, finding their way into all the pots arranged on or plunged in these beds. Years ago I gave up using such materials, preferring to arrange the plants on beds of clinkers and ashes, thereby keeping plants set on them free of worms. During hot weather unplunged plants may need more water than do those plunged in heating material, and they must have their surroundings kept uniformly moist, but during at least eight months in the year the former have the advantage. At Hill House, Langport, Eucharises and other plants are in an admirable condition, and all are arranged on beds of clinkers.

W. Iggulden.

Sericographis Ghiesbreghtiana. — Some years ago this used to be grown extensively, and was looked upon as one of the most useful plants for winter flowering. When grown singly the plants require two years to make good, bushy, flowering plants. I used to bloom it well in 8-inch pots. When growing old plants on, they were cut back as soon as they had done flowering, kept in an intermediate house and repotted early in the year, using a rather light sandy compost and good drainage. The plants like a rather moist atmosphere while making their growth, and the syringe must be used freely to keep down red-spider. By the middle of July good-sized plants will have been made, and they should then have a period of rest, otherwise the bloom will not set. I used to put them out of doors in a sunny position and keep them rather dry for a time. They must be taken indoors again by the end of August, or earlier if the weather is bad, and they will then soon begin to show flower. I do not now remember exactly when the first blooms opened, but I think early in October, and they lasted till Christmas. When growing them on from cuttings, five or six plants may be placed in the same pot. It is essential to get the plants potted early, as late-potted plants, or those grown in the shade, will not flower freely.—A. H.

Flower Garden.

NEW HYBRIDS OF GLADIOLUS GANDAVENSIS.

It is now about five and thirty years since I commenced the culture of this beautiful autumnal flower. I have witnessed its evolution from small beginnings, when spikes consisting of three or four flowers not one-third so large as some of the present day were considered objects of admiration. I have seen the rapid strides that they have made in every quality which can attract the attention of the florist. I have seen them with spikes of eighteen to twenty expanded flowers open at the same time, and instead of the flowers being back to one another in two rows as they used to be, they are now fully in view, and so close together that it would be impossible to insert a paper knife between them. I have seen these flowers so increased in size (though I put this as their last recommendation), that one bloom is fully equal to three of those we used to have, while nearly all shades of colour with the exception of blue are represented amongst them, yet with all this they are neither popular in the true sense of the word, that is, not widely grown, nor round the metropolis are there many occasions on which the public have an opportunity of seeing them. When I come to consider what the cause of this is I think it may be fairly traceable to two sources; in the first place, the Gladiolus is a very troublesome flower to cultivate successfully, and secondly, very disappointing, owing to the many losses which everyone who grows it has to deplore. I am frequently told by beginners who have been growing them perhaps for a couple of years that they have not experienced any losses, but after a few years their ardour cools and they drop out of the course. I have said that it is a troublesome plant to grow and it is a more troublesome one to exhibit. There are a few months in the year, say from December to March, when they are quietly resting on the shelves, when they give no trouble, but from that on they are a continuous care. They must first of all have the ground carefully prepared for them (best done in the autumn), and then each bulb must be carefully examined to have the outer skin slipped off before planting, for it very often happens that to all appearance the bulb is sound, but when the skin is taken off it is found to be either withered or rotten. Then as the plants grow they have to be staked and tied, and every few days they have to be examined for this purpose; each bulb must have a stake to itself. Great care is also required that the spikes may be quite straight. In some cases this staking has to be done twice over, for, as the flowers are not fully developed, it may so happen that the stake may be in the front of the flower instead of in its proper place at the back. Those who are very careful about exhibiting will have cases to put the flowers into which they intend to show. After the Gladioli have done flowering they have to be harvested, each variety has to be kept distinct, the bulbs have to be cleaned and dried, the spawn has to be collected and to be put by in small paper bags, the bulbs themselves to have their names written on them, so as to avoid all mistakes, and placed in a cool place free from frost on shelves or trays, to remain there during the winter months. And what shall I say as to exhibiting them? Various plans have been tried. It is impossible to carry them lying down, as they rub one against the other, and consequently, whatever may be the form or character of the case in which they are carried, it must necessarily be a large one, and at the tender mercy of railway porters and others. Then, when you get them to the place of exhibition, they are not like a tray of Dahlias or Chrysanthemums—which you have only to draw out of the case and put upon the exhibition table—but each spike has to be taken out separately and tied to a rod in order to keep it in an upright position. Now I contend that there is no flower which we grow in collections that is so troublesome as this. Tulips are troublesome, but nothing like the Gladioli; and this is one of the reasons that makes me believe that the attempt to resuscitate tastes for that flower, showy and beautiful as it is, will not succeed in the south of England.

But there is also, as I have said, another drawback to general cultivation, and that is its tendency "to make itself scarce." You receive a bulb, or harvest it yourself, to all appearance perfectly sound; you plant it, it grows, sends up a great green shoot, the flower-spike forms, it begins to show colour, and then all at once it turns yellow and dies off, or it may even go so far as to flower well and immediately afterwards die off. Is it wonderful that with these conditions its admirers are many, but its cultivators few?

I now come to write of the novelties which I have had the opportunity of seeing during the past year, those I mean which I have grown myself and which I have had, therefore, time to examine. The following are novelties I have grown:—

Valkyrie.—A long spike of scarlet flowers, flaked with slaty violet, a kind of colour which is not, I think, very much appreciated with us, although the French seem to regard it with favour.

Olympe.—A very large flower and well opened, a deep rose colour shaded with lilac, with a pure white spot; a novel flower.

Trigillia.—A flower of quite a distinct character, a curious shade of salmon colour, occasionally flaked with carmine-rose.

Diadème.—The finest yellow flower yet brought out; fine large spike with well opened flowers, apparently of a good constitution.

Gargantua.—A flower of exceptional merit, very large and very open, carmine-rose, profusely striped with violet-red and very light in the centre.

Berryer.—Very bright coloured flower, cherry-red, lightly striped with lilac, with a large white spot; a fine spike.

Behanzin.—A fine distinct spike, another of those slaty flowers, but with a white line in each division, which lightens it up considerably.

Gertrude.—Very large flower with long spike of a white colour, suffused with pink; very striking.

Bernice.—A good yellow flower, bearing a good deal of likeness to Souchet's Berenice, and, like it, apparently of a better constitution than the yellows we already possess.

Hilda.—A very beautiful and distinct ivory white flower, flaked on the edge with rose, pale yellow throat, good constitution, and a flower of good substance.

Rosalind.—A pale rose flower with a long spike, flaked and striped with crimson, very distinct and large.

Decima.—A very fine spike of large, well-opened flowers, with a pale rosy white ground, flaked on the edges with crimson, novel and distinct.

When in these descriptions I make use of the terms large, well opened, good spike, they perhaps convey a very inadequate notion of the meaning of these terms. Take, for instance, that of size; I may say that a variety has large flowers, but so I might have said a dozen years ago of a flower which would be now considered far too small, but this must be the case in all things which are continually improving. I have said nothing in these notes of some of the new varieties of the Lemoinei type, although in fact just in proportion as they improve the nearer they approach to the gandavensis type, than which I do not think they are more hardy, for if the same protection which Lemoine insists upon is necessary for them at Nancy, a very cold district of France, were to be given to the bulbs of the gandavensis section, I believe they would be equally well able to stand our winters. If any amateur has a good, well-drained soil which will grow Strawberries well, I think that he would be likely to succeed with this beautiful autumn bulb, but he must be prepared for some disappointments, now much less to be lamented over than formerly, for he can by the expenditure of a few shillings replace his losses. There is certainly no more beautiful occupant of our gardens during the month of August and the early part of September than the stately and beautiful varieties of this charming flower. Delta.

THE ENGLISH TULIP.

The Tulip is perhaps most charming in its variety, especially in its changes from the breeder or self-coloured state to its rectified or broken state. The bloom that last year was purple, that is, each petal purple with the exception of a small section of white at the bottom, which forms the base or ground colour, this year may break. The flower may be white, except a fine edging of purple round every petal, a feathered flower, or it may come beautifully marked in another way. In addition to each petal being edged all round with purple, it may also be marked with a sort of miniature Beech tree of purple, the trunk of the tree being the centre of the petal or beam, the purple colour branching outwards until it joins the edging or feathering, when it is called a flamed flower. The precise year this change or break may take place no one can foretell, but come at some time it assuredly will. Some bulbs continue to give the lovely self-coloured blooms for many years, while others soon rectify or break. It is somewhat surprising that this old English flower is not more often seen in our gardens, as it requires no special skill to cultivate, and will grow well in town or country. From the time the bulbs are planted in November or December till about the following March no care or attention is needed. As to soil, that of the kitchen garden will do well, and no manure is needed if the ground has been enriched for the previous crop. Many beds are to be seen of the Dutch Tulips, but few of the florists' Tulip, yet one may obtain a hundred of the latter almost as cheaply as of the former. In earlier years no doubt the English Tulip was difficult to obtain and expensive, but it is not so now. One hundred mixed Tulips may be purchased for less than £1, and I am sure all who grow them will find great pleasure therein, and be surprised they have not grown the flower before. The English Tulip is later than the gorgeous Dutch variety we see so commonly in April and not so dwarf, its blooming time being the "merrie month of May," and its flower-stem from 2 feet to 3 feet high. The uninitiated in Tulip culture may readily see that neither in form nor in colour does the Dutch Tulip approach the English florist's Tulip. The specimens exhibited at the Temple show last May showed very clearly that the Tulip may be grown to perfection in and around London.—C. W. N., *Royal National Tulip Society, Manchester.*

—— The Rev. F. D. Horner, the late Samuel Barlow, Mr. J. W. Bentley, and other eminent cultivators of the amateur's English Tulip have with myself during many years past placed before the public, in writing and otherwise, the great pleasure and satisfaction which are derived by all cultivators of the Tulip. As most lovers of florists' flowers are already aware, the cultivation of the English show Tulip has during the last half century been almost exclusively confined to Lancashire, Yorkshire and the midland counties, in conjunction with the Royal National Tulip Society, and the great desire of the principal members of this society has been to occasionally encroach upon the space of the several London periodicals with a brief article upon the subject in the hope of encouraging the amateurs in the neighbourhood of London and in the south to cultivate this somewhat neglected florist's flower. It has been shown over and over again how largely and enthusiastically it was cultivated in the south during the early part of this century and for centuries previously. Many of the old southern growers' names might be enumerated, such as Strong, Lawrence, Goldham, Headley, &c. Thomas Hogg, in his treatise on the "Cultivation of Florists' Flowers," says, in alluding to those who were then cultivating Tulips: "To such I can with truth say that I have always been a great admirer of the Tulip. I esteem it the masterpiece of perfection, and it is the pride and boast of every amateur who grows it." It is easy for every Tulip grower to confirm Hogg in his sincere expressions, and it is at the same time gratifying to know that the trouble which has been taken during the last few years in keeping the show Tulip prominently before the public has met with its reward. Messrs. P. Barr and Son intend offering silver medals as prizes in conjunction with the Royal Horticultural Society at the ensuing Tulip exhibition, which will be held in London in May next, and strong efforts are being made to organise a Tulip congress to be held on the day of the exhibition.—James Thurstan, *The Green, Cannock.*

PLEASURE GROUND NOTES.

Berried trees and shrubs.—If there is any truth in the old saying that a hard winter invariably follows a profusion of berries, we are likely to have some sharp weather in 1895, for nearly all berry-bearing trees and shrubs are laden with fruit. This in the case of the Holly is somewhat remarkable, as two fruitful seasons consecutively are not often known. The common Holly does well with me and assumes the dimensions of a small forest tree, plenty of specimens being over 50 feet high and well furnished. When trees of this description are well berried, they are, until the birds make a clearance of them, quite a prominent feature of the pleasure ground. The variegated and yellow-berried forms are also covered respectively with their light red and golden fruit. The profusion of berries is not confined to the Holly, all trees and shrubs being well supplied, from the Mountain Ash and Cratægus in variety to the Berberis, the common Brier of the hedgerow, and the Snowberries. Clumps of the last show quite a mass of the white fruit, and are just now a very pretty feature of the shrubbery. I notice also that several of the less known fruits employed occasionally in the pleasure grounds, as the Siberian Crab and the Apple and Pear-shaped Service, have been very heavily cropped.

Trailing plants.—Sundry places in many pleasure-grounds in the way of bits of steep banks, old stumps, bits of ruined walls, &c., that were formerly overrun with weeds, or at best covered with Ivy, are now often planted with flowering subjects that help to brighten up sites which would otherwise be quite given over to the prevailing greenery. Among suitable plants (to take only common things) are Clematis montana and C. flammula, the double pink and white Brambles, Lonicera brachypoda and L. aurea reticulata, Ceanothus azureus, a much stronger grower than the newer kinds, and therefore more suitable for rough places, with such Roses as Aimée Vibert, Blairi and Turner's Crimson Rambler. The first and last-named would have a beautiful effect so planted that their branches and flowers would intermingle. Several correspondents have referred lately to the very fine show made this season by Tropæolum tuberosum and T. speciosum, and, given suitable situations, they make very beautiful trailers.

Climbers.—In one or two instances climbing plants on walls were badly cut last winter, and if any gaps exist now is the time to fill them up. Flowering plants should as a rule be selected, the proportion of these to anything evergreen with insignificant flowers or a very short-lived season being at least in the ratio of two to one. A good half-dozen would be Ceanothus Gloire de Versailles, Chimonanthus fragrans, Escallonia Philipiana and E. sanguinea, the white and rose-coloured Pyrus and Spiræa prunifolia fl. pl., with perhaps Berberidopsis corallina and Aloysia citriodora. The two last-named will require a little protection in sharp winters. In the case of old-established climbers that happen to be overhanging walls, they may receive a little attention as soon as the leaves have fallen in the way of the removal of any superfluous shoots, and tying in others that will be needed later on to replace any that may require removal. Anyone new to the work will require a caution not to remove anything in the way of flowering wood, or at least only what may be absolutely necessary.

Hardy plants for the pleasure ground.—The mention above of the Lemon-scented Verbena reminds one that where the supply of foliage for cutting is not very abundant, a few plants for this purpose may be put in on outlying borders, or, if none such exist, a portion of rough shrubbery may be cleared to make room for them. There are also many of the strong-growing herbaceous plants that may with advantage find a permanent home in such situations if there is little accommodation for them in the regular garden. They invariably do well on the site of an old shrubbery if, after the removal of the shrubs necessitating a deep working of the ground, a liberal dose of good holding manure is trenched in. The advantage gained by such planting is not only the brightening up of hitherto dull places, but a liberal supply of flowers, thereby saving the display on more prominent borders. Such sites, too, being, as a rule, sheltered and a little shaded, the flowers last longer than when fully exposed to a hot sun. As such borders generally get the benefit of the leaf fall, it is as well to leave the latter all over the surface, and later a very thin sprinkling of soil may be shaken over them to prevent a high wind blowing them about. E. Burrell.

Claremont.

SNOWDROPS.

Pretty firstling of the year,
Herald of a host of flowers.

Of all our flowers there is perhaps none that appeals more closely to the heart than the Snowdrop—no sight that we would less readily relinquish than that of

The wan Snowdrop sighing for the sun
On sunless days of winter,

for, although we feel that there is truth in the old adage "As the days lengthen the cold will strengthen," the silent sermon preached by the modest down-bent head is

Out of the snow the Snowdrop,
Out of death comes life—

that, out of the death of winter is coming—though afar and all too reluctantly—the life of returning spring, and the glad certainty possesses us that

The sap will surely quicken soon or late,
The tardiest bird will twitter to a mate,
And spring will dawn again with warmth and bloom.

It is true that when the scent of the Prim roses and of the white Violets fills the air, and the wild Hyacinths spread their azure, sky-bright carpet beneath the grey-stemmed Beeches, the pale harbinger of spring will for a space sink into oblivion. Such involuntary inconstancy is but the outcome of that creed which teaches us the worship, not of one flower alone, but of all, as the charms of each are in turn unveiled by their guardian goddess Flora. Each fresh blossom unfolding its beauty seems that very acme of loveliness for which we have been waiting, until outshone by yet another rival; and, as with the form and colouring of flowers, so is it with their scents. Lives there anyone who can affix a standard of preciousness to their perfumes? Who can critically discriminate between the values of the fragrance of Clove, Carnation, Lily of the Valley and the Cabbage Rose? But, after all is said, however much the praise of other flowers may be sung, the "Fair Maid of February," the

Flower that first in the sweet garden smiled,
To virgins sacred and the Snowdrop styled,

may rest content in the knowledge that at her shrine are the first fruits of our homage offered.

Snowdrops are intimately connected with the recollections of childhood. We remember the little plots where we planted them, the daily, nay, almost hourly visits paid to see if they were "up"—the white patch we espied beneath a Blackthorn hedge, which, to our delight, proved to be a clump in full bloom.

In poetry the Snowdrop stands unrivalled, save by the Lily and the Rose. It was the Snowdrop that Tennyson's pathetic creation, the May Queen, longed of all flowers to see again before she died—the Snowdrop, that on St. Agnes' Eve, within the snow-clad convent, lay in the bosom of the novice—the Snowdrop that Scroope and Barry Cornwall wrote of—the emblem of chastity, of graceful maidenhood, pure with the purity of the virgin snow.

Beautiful always, it is only when naturalised that the Snowdrop can be appreciated at its true worth. Then may one see grassy aisles between the Rhododendrons aglitter with hosts of pendent bells and leaves blue-grey—colour of the eyes of Athene—and on a moonlight night mark the white chalices glisten with a satin sheen in the cold, clear air. It is, however, beneath the overarching tree-boughs that the fairest vision of these vestals of the wood is gained. Along the open woodland paths, in a broad wavering line, their countless blossoms gleam, a veritable galaxy, rivalling the Arab's "silver riband," the "milky way" of the firmament. Around the boles of the giant Oaks, up whose gnarled trunks the grey nuthatches climb, peering assiduously into every crevice, and by the margin of the moorhen-haunted lakelet, they stand in their thousands, venturing with the Ivy tendrils to the very brink, where with downcast eyes they gaze at the argent shimmering of their pure images in the dark, still water.

S. W. F.



Snowdrops naturalised. Engraved for The Garden *from a photograph by Mr. S. W. Fitzherbert, Lanscombe House, Torquay.*

Aquilegia chrysantha.—In my opinion this is about the most valuable of all the Aquilegias for cutting and for massing in borders. Many of the more recently-introduced hybrid Aquilegias are extremely chaste and beautiful, but they have not the vigorous constitution that chrysantha possesses, and require a favourable situation to do them well. Moreover, A. chrysantha produces its flowers (which are of a clear canary yellow) on long stems from 1 foot to 18 inches in length, this fact alone enhancing their value for cutting. The new hybrids grow very well with me in a sunny position, but on a north border, where I tried them with a view to secure a longer succession of bloom, they failed. Even on a west well-drained border I find it best to mulch the surface of the ground in November with rough leaf-mould, as if there is much rain during the winter, followed by severe frost, many of the plants die off. I consider the best forms of Aquilegias in their many rich hues equal to the choicest Orchids. —J. C.

LILIES IN 1895.

The year 1895 has not been marked by the advent of any particularly new Lily, and the only one to which a first-class certificate was awarded by the Royal Horticultural Society is one of the oldest members of the genus, viz., Lilium odorum, known also as L. japonicum and L. japonicum Colchesteri. It was shown under this last name when the certificate was awarded—why, it is impossible to say, for the specific title of odorum certainly claims priority, but even then authorities do not agree, as Mr. Baker considers L. odorum to be the correct name, while in the "Dictionary of Gardening" it is called L. japonicum, with odorum as a synonym. In any case it is a very beautiful Lily, belonging to the puzzling Browni group, but a good deal more delicate in constitution than the typical Browni—that is to say, the form grown so successfully by some of the Dutch cultivators and sent to this country. Notwithstanding assertions to the contrary, this Lily is never sent from Japan during the winter months, but from that source L. odorum reaches England in considerable numbers. It is, however, likely to always remain comparatively scarce, as many of the bulbs die the first season after planting. In a few words, the most marked points of difference between L. odorum and L. Browni are, in the latter the bulbs are reddish, the stems dark, the leaves deep green, and the flowers ivory-white inside, heavily tinged with chocolate on the exterior. L. odorum, on the other hand, has yellowish bulbs, green stems, broader and much paler leaves, while the tube of the flower is shorter, the interior less white, and the chocolate outside not so deep as in L. Browni. A coloured plate of a very distinct form of L. Browni was given in The Garden, February 9 of the present year. This variety (leucanthum) flowered at Kew from bulbs sent by Dr. Augustine Henry

from the interior of China, the magnificent L. Henryi being also sent at the same time. The drawing for the plate was of course prepared in 1894, but the Lily in question also flowered grandly this year. Another variety, Chloraster, is also grown at Kew. Lilium Dalhansoni is the only other Lily that was recognised by the Royal Horticultural Society during the year, and this received an award of merit on June 25. It is of hybrid origin, having been raised by Mr. Powell, of Southborough, Tunbridge Wells. It belongs to the Martagon group, the parents being the dark-coloured variety of L. Martagon known as dalmaticum and the Japanese L. Hansoni, whose yellow blossoms are dotted more or less with reddish brown. The hybrid is of good vigorous constitution, and in general appearance about midway between its parents. Being of easy increase, it will no doubt soon become plentiful. This Lily is by no means new, having first flowered with Mr. Powell in 1890, and a very characteristic coloured plate of it was given in The Garden, September 16, 1893. A pretty and interesting Lily of hybrid origin that flowered, as far as I know, for the first time with Mr. Ware at Tottenham is L. Beerensi, said to be the result of a cross between L. chalcedonicum and L. excelsum or testaceum (itself a hybrid). The flower is of a pleasing shape and deep apricot in colour.

Occasionally some singular Lilies may be picked up at the London auction rooms, and last spring among a number of Japanese bulbs was a quantity offered under the name of L. elegans davuricum. The bulbs were very much like some form of elegans, notably one that is frequently imported from Japan and known as L. elegans marmoratum aureum, robustum, or guttatum. They, however, turned out to be quite distinct, and, judging from the individual differences to be found among them, were, I should say, seedlings. The bulk consisted of one type, the plants reaching a height of 2 feet to 3 feet, the stem being thickly clothed with narrow leaves, 3 inches or a little more long and dark green in colour. The major portion of the petals is of a salmon-red tint, which changes in the centre to more of an orange hue, dotted with chocolate. The petals are narrow, and expanding as they do more widely than in any of the varieties of L. davuricum, they form quite a starry flower. During the growing season a very prominent feature of this Lily is the excessive woolliness of the young leaves and flower-buds, and even before the buds make their appearance the growing central portion of the stem is simply a white woolly mass. The remarks will apply fairly well to the majority of these Lilies, but a few were of a deep orange, flaked irregularly with crimson, and in two or three cases the colours were reversed, the crimson preponderating. In these flaked forms the flowers did not open quite so widely as in the others, being, in fact, as far as shape is concerned, more like those of davuricum, but in all cases the foliage was the same. In some of the latest flowering the colour was the same as that of the bulk of these Lilies, that is, a salmon-red with an orange centre, dotted with chocolate, but instead of being arranged in an open head these were disposed of more in a deltoid raceme, as in L. croceum. A very noticeable feature in connection with these Lilies was the lateness of their blooming period, which to a certain extent was doubtless caused by the fact that these bulbs were not sold till March 13, but in any case they were exceptionally late, for I noted good fresh flowers and unopened buds as late as July 20, at which period nearly all the cup-shaped Lilies were over. Some good examples of this Lily were very attractive in Hyde Park during the summer. It is probably of hybrid origin, perhaps between L. davuricum and some variety of L. elegans, which may be marmoratum aureum, as in this the young foliage is very woolly, but hardly to such an extent as in the new-comer.

Though there is little to say concerning new Lilies, yet some of the recent introductions have this season been more generally grown. L. nepalense is an instance of this, for considerable importations reached this country early in the year, so that it was possible to buy bulbs at a much cheaper rate than formerly. The Nepaul Lily is very effective for grouping, as, owing to the tall slender style of growth, an isolated specimen or two is not seen at their best, but the gracefully-reflexed distinctly-marked blossoms are very telling in association with other plants. The bulbs frequently remain dormant till spring is well advanced and the flowering is somewhat irregular, there being, if a quantity is grown, sometimes an interval of three months between the first and last blossoms. For late flowering, some examples will hold their own with the Neilgherry Lily (Lilium neilgherrense), for I noted good plants of L. nepalense in bloom as late as November 14. It does not seem to retain its vigour long in this country, and, like some other Indian Lilies, it is very probable that in order to ensure a good display of blossoms every year annual importation will be necessary. L. Lowi, which, like L. nepalense, is essentially a greenhouse species, is certainly very distinct, though less showy than some of the others. It still remains one of the rarest of all, though it is more grown than was formerly the case. The white bell-shaped flowers, dotted with purple, are, as a rule, borne during the summer months. Lilium Lowi naturally grows with L. nepalense, and another charming Lily, L. sulphureum, which about half a dozen years ago, when first flowered by Messrs. Low, attracted a large share of attention under the name of L. Wallichianum superbum. It is a tall, stately-growing Lily, whose funnel-shaped, whitish blossoms are tinged with red outside and in the interior with rich yellow. This Lily seems more robust in constitution than the other Burmese species, and for the embellishment of a large structure towards the end of the summer, and often well on into the autumn, it is very valuable. L. Henryi improves year by year, and it must, I think, be regarded as one of the very best Lilies of recent introduction. The English climate seems to suit it exactly, for even small bulbs soon attain flowering size, and the winter seems to have no effect upon it. Considerable numbers of this Lily were imported early in the year, and as in nearly every case they continue to improve, it is now often seen. A noticeable feature of the four Lilies just mentioned—viz., L. Henryi, L. Lowi, L. sulphureum and L nepalense—is the great resemblance the bulbs bear to each other, so that it is impossible to select them with certainty. L. Alexandræ, which first came into notice two years ago, when it received a first-class certificate from the Royal Horticultural Society, has been little seen this year. It is a very distinct Lily, which when it first flowered was said to be a hybrid between L. longiflorum and L. auratum. Its general appearance certainly suggested that such might have been its origin, but that it was artificially produced would appear to have been disproved. In the spring of 1893 some very fine bulbs of this Lily were sold under the name of Lilium Uke-uri, and they flowered beautifully, but I have not seen such fine bulbs since. With care it seems to improve under cultivation. In the early part of the year a considerable quantity of L. Alexandræ could be obtained, but the bulbs were too small to flower this season; hence they were not much sought after. L. Grayi is another of the newer Lilies, but instead of being a native of the eastern hemisphere (as are all the preceding), it comes from North America, and is a very near ally of L. canadense. The flowers of the new-comer are somewhat smaller than those of the Canadian Lily and less expanded. Their colour is deep crimson-red, the inside freely dotted. The bulbs of this are of a peculiar rhizomatous growth common to the Panther Lily and two or three others.

Of the old thoroughly established species and varieties of Lilies there is little to say, except that the very fine autumn was specially favourable to Lilium speciosum and the latest flowers of L. auratum in the open ground. Last season the importations of L. auratum and the other Japanese kinds did not suffer, as many thought, from the war between China and Japan, and good bulbs were as cheap as ever. In many places, too, they yielded a grand display, but, on the other hand, in too many gardens they suffered greatly from the mysterious disease which often plays havoc with the golden-rayed Lily. The importations are this year later than usual, for in 1894 the first sale of L. auratum took place on October 24, and the year before that October 19, and now, November 14, the date of the first sale is not yet announced, while singularly enough a quantity of Japanese bulbs of L. longiflorum were disposed of in the London auction rooms as early as October 9, though in previous years bulbs of this kind never reached here before those of L. auratum. The flowers of the Japanese L. longiflorum are very superior to those of the ordinary kind as grown by the Dutch, and they yield a magnificent display when planted out in the open ground. Year by year the flowering season of L. Harrisi seems to be spread over a longer period, and at a meeting of the Royal Horticultural Society, held on October 15, a group of well-flowered examples was contributed by Messrs. Veitch.

A novel feature in connection with this class of plants was the holding of a Lily exhibition at the Botanic Gardens, Manchester, from October 22 to 26. Though successful, it was certainly far too late, as but few Lilies were to be had in bloom at that period, but as a set-off they included the showiest of all for pot culture, that is the several forms of L. auratum and L. speciosum in its innumerable varieties. While the bulk consisted of these, other kinds represented were L. Batemanniæ, L. Leichtlini, L. Henryi, L. nepalense, L. longiflorum, and some Tiger Lilies. Had the exhibition been held nearly two months earlier, a far greater collection of Lilies might have been brought together; still, then that invaluable kind for pot culture, L. speciosum, would have been absent unless forced, and then it is not nearly so attractive as when allowed to grow naturally. Though somewhat earlier, much the same may be said of L. auratum. H. P.

GARDEN VARIETIES OF CLEMATIS.

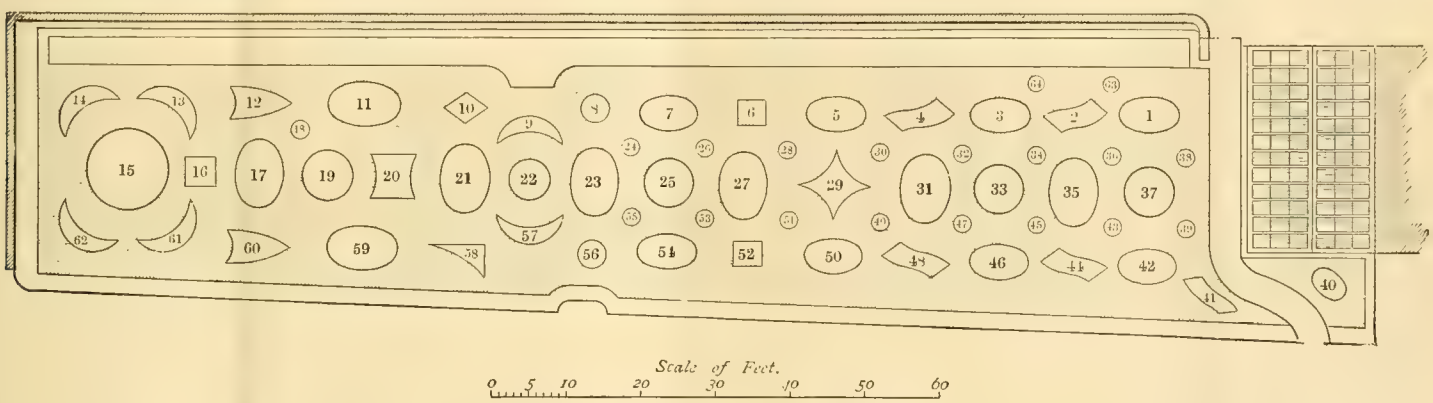
The warm, bright weather, of which we have had so large a share during the present autumn, has caused the different garden varieties of Clematis to be unusually free-flowering, and towards the end of October some of them were still very beautiful. Two varieties that have given great pleasure for months are the well-known C. lanuginosa candida, whose very large pale-tinted blossoms are remarkably showy and admired by everyone. The second to mention is C. rubella, one of the Jackmani section, and, like it, raised by Mr. Jackman, of Woking. The flowers of C. rubella, which are of a rich claret-purple colour, are not particularly large, but are borne in such numbers, and so continuously from July to the present time, that it must rank (at all events at this season) as one of the very best of all the varieties of Clematis. With the different species and garden varieties of Clematis it is possible to have flowers throughout the greater part of the year, for the various hybrid forms bloom from May to the present time—not the same varieties, it is true, but the members of one section succeed those of another, so that if a judicious selection of several varieties is made, some one or the other will be in flower throughout the time just mentioned. Of the different species, the Himalayan C. graveolens, with yellow flowers, is still blooming. After the autumn Clematises are over there is a lull for a time, but early in the new year, should the weather be fairly mild, the South Australian evergreen Clematis (C. cirrhosa) will produce its blossoms. The flowers are not particularly showy, being of a greenish white tint and covered on the exterior with a silky down. Individually they are rather less than an inch in diameter, but are borne in considerable numbers, and the setting of prettily cut, deep bronzy green leaves serves to form a very uncommon, but attractive winter picture. This species, which is

also known as C. balearica, was introduced into this country nearly 300 years ago, but it is very rarely met with. After this Clematis is past, one of the next to unfold its blossoms is C. montana, a native of Nepaul, from whence it was introduced in 1831. This species is now well known and deservedly popular, for it grows freely and blooms with the greatest profusion. Splendid examples of this may be occasionally met with in the immediate neighbourhood of London. While some hybrid forms of Clematis are grown in pots, C. montana is very rarely treated in this way, yet I have seen some very pretty examples forced prematurely into bloom. The plants had been trained around a few sticks, and, not being tied in too stiffly, formed, when clothed with their pure white Wood Anemone-like flowers, very attractive objects, and that, too, at a time when their relatives out of doors were still wearing their winter garb. H. P.

BELGROVE GARDEN.

The following is the detailed account of contents of Belgrove Garden during summer and autumn of 1894, with indications of contents in spring. The numbers of the beds correspond with the numbers of the beds in the plan.

(1) Dunrobin Bedder dwarf Fuchsia edged with silver bicolor-leaved Geraniums in ten named varieties. Bed is thickly edged with Milla conspicua and filled with single early Tulips in the spring. (2) Named double tuberous Begonias carpeted with Mesembryanthemum corditolium variegatum, edged with dwarf blue Lobelia Die Schöne Darmstaderin. This bed is filled with Proserpine single early Tulip in spring. (3) Miscellaneous spring bulbs covered with an annual Antirrhinum in summer. (4) Named double tuberous Begonias, carpeted same as No. 2, edged with pure white dwarf bedding Lobelia Reine Blanche. Bed is filled with Keizer Kroon single early Tulip in the spring. (5) New named double tuberous Begonias in 30 varieties. This bed is also thickly edged with Milla conspicua, and is filled with early single Tulips in spring. (6) Five of the choicest and newest varieties of the dwarf Gladiolus-flowered Cannas raised by Pfitzer, of Erfurt, Crozy, of Lyons, and Kelway, of Langport. The bed is edged with the same dwarf Fuchsia as in No. 1, bordered with Henderson's sweet-scented Pansies. (7) Lemoine's hardy hybrid Gladioli of the Lemoinei and Nanceianus sections. The bed is thickly edged with Colchicum autumnale fl.-pl. (8) New Eschscholtzia Croix de Malte and Anthemis cupaniana. Bed is edged with various forms of Chionodoxa, Galanthus and Milla for spring bloom. (9) Centre row of pegged-down Coprosma Baueriana variegata, surrounded with Iresine Lindeni and edged with dwarf Ageratum Tapis Bleu. The bed is filled with single early Tulips in spring. (10) Named double tuberous Begonias, edged with Milla conspicua candida. (11) Mixed Phlox Drummondi, edged with dark crimson Antirrhinum. (12) New annual Linaria Hendersoni ericoides. The bed is thickly edged with Brodiæa grandiflora. (13) New pure white Antirrhinum Queen of the North with line of dark crimson variety down the centre. (14) Papaver nudicaule or Iceland Poppies in three colours—white, yellow and orange. (15) Iris Kæmpferi in 30 varieties, carpeted with Tufted Pansy Sylvia in centre, surrounded with broad rings of Ardwell Gem and Duchess of Fife. (16) Clump of hardy Crinum Powellii album edged with several kinds of Daffodils. (17) Nemesia strumosa. The bed is thickly edged with Anemone nemorosa alba plena, and is filled with double Tulip Mariage de ma Fille for spring bloom. (18) Ten of the choicest Daffodils in cultivation—namely, De Graaff's fine seedlings, Mme. de Graaff, Glory of Leyden, Golden Vase, F. W. Moore and Cecilia de Graaff, and W. B. Hartland's Ione, Jennie Woodhouse, John Ridd and Lorna Doone, with clump of the fringed trumpet Irish Daffodil Crom-a-Boo in the centre. (19) Single tuberous Begonias, edged with the blue-flowered Eritrichium strictum. This bed is filled with 60 single Hyacinths in spring in four colours, planted in a central clump of 10 of one variety, surrounded with rings of the three others, numbering 12, 18 and 20 respectively. (20) Complete collection of Girdlestone's Tom Thumb dwarf Dahlias in 13 named varieties. (21) Phlox Drummondi. The bed is thickly edged with Colchicum autumnale flore-pleno, and filled with single early Tulips in spring. (22) Pattern bed of double tuberous Begonias, clump of Lemoine's scarlet Lafayette in centre, surrounded by rings of Crousse's Mme. Ernest Tourtel (creamy white) and Ryder's Pink Robert Browning, with border of double Ivy-leaf Gerania pegged down. The bed is thickly edged with Colchicum autumnale flore-pleno album, and is filled with early double white Tulip Rose Blanche in the spring. (23) Double named tuberous Begonias following a bed of double Stocks. This bed is filled in spring with early single Tulip Keizer Kroon. (24) Pyramid of variegated Tropæolum Lobbianum Spitfire, edged with dwarf blue Lobelia and bordered with Silene alpestris. Each of these small round beds is filled with one variety of single early Tulip in the spring. (25) Laing's named double tuberous Begonias, with a few of Mlle. Perrin's and one of Lemoine's varieties, edged with dwarf golden-foliaged Lobelia Goldelse. The bed is filled with 60 single Hyacinths in four colours, as in No. 19. For the spring: (26) Datura cornucopia. This bed is thickly edged with Seubertia, or Triteleia, laxa, and Caliprora lutea for spring. (27) Venidium calendulaceum. This bed is filled with early single Tulip Couleur Cardinal in spring. (28) Single specimen of double Begonia Ryder's Robert Browning, edged with dwarf blue Lobelia. (29) Yellow double tuberous Begonias, edged with a thick border of Mesembryanthemum cordifolium variegatum. This bed is filled in spring with early single Tulip Duchess of Parma. (30) Single specimen of double Begonia as in 28. The bed is thickly edged with Brodicea grandiflora. (31) Double Stocks. Bed is filled with early single Tulips in the spring. (32) Same as No. 30, but edged with mixed Croci. (33) Crousse's double tuberous Begonias, edged with Gazania splendens variegata, and thickly bordered with Anemone nemorosa alba plena. The bed is filled in spring with 60 Hyacinths, arranged as in No. 19. (34) Same as 30, edged with Anemone nemorosa Robinsoniana. (35) New dwarf French Marigold Croix de la Legion d'Honneur. This bed is filled with single early Tulips in spring. (36) Same as No. 30, but edged with the golden variegated Gazania splendens and bordered with Campanula garganica. (37) Single tuberous Begonias, edged with pegged-down double Ivy-leaf Geraniums, and outside with double white Colchicums. This bed is filled in spring with double scarlet early Tulip Imperator rubrorum. (38) Same as 30, edged with Crocus speciosus. (39) Same as 30, edged with golden Gazania. (40) Dwarf trailing perennial Phloxes. (41) Tufted Pansies. (42) Tigridia grandiflora and T. conchiflora, edged with mixed Croci. (43) Same as 30, edged with Campanula turbinata and Triteleia Stella. (44) Double tuberous Begonias, edged with Barnard's perpetual dwarf blue Lobelia. This is filled with early single Tulip Keizer Kroon in spring. (45) Same as 30, edged with double Ivy-leaved Gerania. (46) Souillard and Brunelet's hardy hybrid Gladioli, with thick edging of Milla conspicua or Triteleia uniflora. (47) Same as 30, edged with dwarf blue Lobelia and bordered with Aubrietia græca variegata. (48) Double tuberous Begonias, edged with dwarf blue Lobelia. (49) Same as 30, edged with Camassia esculenta. (50) Tufted Pansy Sylvia and other good sorts. (51) Same as 30, thickly edged with Chionodoxas. (52) Choice forms of Tigridia lilacea, rosea aurea, alba, violacea, and Van Houttei. (53) Hymenocallis Deleuili, edged with dwarf blue Lobelia and Silene alpestris. (54) Nemesia strumosa. (55) Same as 30, with Silene alpestris edge. (56) Lilium Martagon var. picturatum, with Campanula turbinata round it. (57) Same as No. 9, but with blue Ageratum The Zoo round it. These beds are filled in spring with mixed early single Tulips. (58) New Calceolaria Simon Durand down the centre, dwarf Victoria blue Cornflower round bed, golden variegated Cineraria maritima at each corner, filled up with new Papaver alpinum roseum and variegated-leaved Geraniums. (59) Tufted Pansies of various good sorts. (60) Montbretia crocosmiæflora, all best sorts. (61) Salpiglossis grandiflora in many varieties. (62) Convallaria majalis, undisturbed for forty-five years. (63) Daphne Blagayana, edged with an autumn Crocus. (64) Senecio sagittæfolius, edged with Anemone blanda alba and other spring-flowering bulbs.



Plan of Mr. Gumbleton's garden at Belgrove, Queenstown, Co. Cork.

Along the whole length of the garden runs a broad border filled with hardy herbaceous plants, consisting of some Tree Pæonies, the best perennial Phloxes, clumps of most of the best sorts of Daffodils, and edged on the side

next the garden with a double line of Narcissus eystettensis plenus, or Queen Anne's Daffodil. The chief feature of the end of this border near the house is a series of large clumps of the hardy hybrid Crinums, consisting of C. Powelli type, deep rose ; C. Powelli intermedium, pale pink ; C. P. album, pure white ; C. grandiflorum, C. abyssinicum, C. pratense, C. yemenense, and C. Moorei. Here are also established clumps of the fine Natal composite Gerbera Jamesoni and the giant Forget-me-not of New Zealand (Myosotidium nobile). As the chief feature in this garden in spring is the display of early blooming Tulips, it may be stated that about 3300 bulbs are planted about the middle of November.

W. E. Gumbleton.

NOTES ON PLUMS.

The following notes on Plums which we are enabled to publish through the kindness of our correspondents will doubtless prove interesting to our readers. They are from all parts of the United Kingdom. The following are the questions which we submitted :—

1. *The value of the Plum as an orchard tree, and how far its culture deserves extension, and in what soils?*
2. *Your opinion as to the value of new Plums, including those of Japanese, American, or European origin?*
3. *The best flavoured Plums?*

The best Plums for flavour are Jefferson, Kirke's, Belgian Purple, Denniston's Superb, Coe's Golden Drop, and the Gages. For market the best early heavy cropping varieties are Rivers' Early Prolific, Czar, and Victoria, and for late use Monarch is deserving of extensive cultivation. In some seasons Plums have a good marketable value, but as to planting extensive orchards of Plums alone, I should be somewhat doubtful. In mixed orchards, with more than one string to the bow, good sorts might be planted, and in their turn be very profitable.—H. Markham, *Mereworth Park, Maidstone.*

In reply to your questions *re* Plums, I regard the Plum as one of the most useful of hardy fruits, and its cultivation should be extended. It succeeds best in limestone soils, but most well-drained soils will grow it well. I think it ranks next to the Apple. New varieties have not been much planted in this district. The American varieties, Jefferson and Washington, are very good, but rather late as standards for this district. The best flavoured Plums are the Gages, viz., July Green Gage, Oullin's Golden, Reine Claude de Bavay, and Bryanston Green Gage. Good early varieties are Early Prolific Green Gage, Prince Englebert, and Kirke's. Good cooking varieties are Victoria (the best here), Pond's Seedling, White Magnum Bonum, Orleans, and Prince of Wales (a good variety, but the plants often die in this district). Denniston's Superb and Coe's Golden Drop are excellent dessert varieties.—Bailey Wadis, *Birdsall House, Yorks.*

The Plum is not planted as an orchard tree to any great extent in this district. But where it is so planted it proves to be a fairly remunerative fruit to the planter. It is found to grow and fruit freely on most kinds of soil. But it is on the medium and sandy loams resting on chalk, and on the heavier calcareous loams resting on well-drained clays or loamy gravels, where it makes the best and healthiest growth and bears the most abundantly. On the former soil the growth made is not so robust as on the latter, but the wood generally gets better ripened, and as a consequence the trees fruit more freely and constantly, and, as a general rule, the fruit is of better flavour. On the latter and heavier soil the fruit mostly attains to a larger size, and in sunny seasons is of excellent flavour. On these soils the trees are apt, in the early years of their existence, to make too vigorous and sappy shoots, which, in dull seasons, do not get sufficiently ripened to ensure free fruiting, and this necessitates the too frequent labour of root-pruning and branch-thinning. The most reliable cropping kinds, and perhaps the most profitable to the grower on a large scale, are to be found among the cooking Plums, such as Victoria, Pond's Seedling, The Czar, Mitchelson's, Kirke's, Pershore, Emperor, and one or two others. The best-flavoured Plums are undoubtedly to be found among the Gages, such as Oullin's Golden, Transparent, Jefferson, Coe's Golden Drop (perhaps the best-flavoured Plum of any), Bryanston Gage, Denniston's Superb, and Reine Claude de Bavay.—J. Kipling, *Knebworth Gardens.*

Our soil is very heavy, consisting of heavy loam and clay subsoil, but it is all drained a rod apart and 4 feet deep, and I consider that there is no orchard tree that will pay better than the Plum in this district (Apples excepted), for during my twelve years here the Plum has only failed me three times. I grow the Plum extensively as an orchard tree, and also on a west wall 85 yards long. Plums grown on the wall are earlier, larger, and better flavoured. I consider that the Plum deserves to be extensively cultivated in this district, provided the ground is thoroughly well drained. The soil most suitable for Plums is good, heavy loam. I prefer to grow the trees as pyramids. Green Gage, Coe's Golden Drop, Jefferson, Prince Englebert, Reine Claude Violette, Transparent Gage, and Kirke's are, I consider, the best-flavoured Plums.—W. Shepherd, *The Gardens, Grenehurst, Dorking.*

Plums thrive well here and are very prolific, especially where the soil is not too rich, but with frequent root-pruning and liberal watering in dry seasons would prove a profitable crop. The best flavoured varieties are Green Gage, Jefferson, Coe's Golden Drop, Kirke's, Transparent Gage and Reine Claude de Bavay.—Thomas Wilson, *Glamis Castle, Forfar.*

I should say the Plum as an orchard tree deserves extension, especially Victoria, which is as useful a variety as any to meet all requirements. We can generally look forward to a good crop of Plums provided we escape the late spring frosts, the soil being of a good loam and not on too cold a subsoil. I find that Jefferson, Coe's Golden Drop, Kirke's, Impératrice, Orleans and Green Gage do best with us ; these are on walls, and Victoria does best on standards. The old Wine-sour I find very useful for preserving and cooking. Coe's Golden Drop is an excellent Plum for us, as it keeps a long time after being gathered and cannot be improved in flavour. In my opinion Green Gages should be more grown, as they are a useful fruit and much appreciated by rich and poor.—G. M. Knight, *Park Gardens, Alfreton.*

The Plum succeeds as a standard in very sheltered positions, and I have seen this season as heavily cropped trees in East Lothian as are to be found in the south of England. It is doubtful, however, if it will succeed as an orchard fruit sufficiently well to pay. Plums thrive and fruit well on our light, open soil. I have tried a number of new Plums, and I consider The Czar to be the most meritorious early sort, and as a late kind Monarch is even better. The best flavoured Plums that I am acquainted with are Coe's Golden Drop, the Gages, and Jefferson. Dark-skinned varieties are less richly flavoured, and the best of these is Kirke's Black.—R. P. Brotherston, *Tynninghame, East Lothian.*

I have seen no Plum cultivated in Scotland which would induce me to begin orchard culture for profit. Compared with those in south, east, west, and midlands of England they are almost worthless. Victoria is the variety most often seen in cultivation away from walls, and seldom more than third-rate. I have seen no new Plums in Scotland outside or under glass to compare for quality with Kirke's, Jefferson, Coe's Golden Drop, and Green Gage. In damp seasons, Plums, like Apricots, are apt to split. The best-flavoured Plums are those stated above, and grown on walls only.—M. Temple, *Carron, Stirlingshire.*

I have tried Plums as orchard trees for several years, and consider them very uncertain. I would not in this district advise them for orchard crops. The only new Plums I have tried are Grand Duke, Czar, and Archduchess. I do not consider them so good as older varieties. The best flavoured Plums are Green Gage, Jefferson, and Golden Drop. The most useful and prolific Plum in this district, I consider, for a garden is Victoria.—Edward Tate, *Balcarres, Fife.*

As an orchard tree where the Plum thrives I should say it would be remunerative if the ground was cultivated between, and bush fruit or vegetables grown underneath. The situation should not be too low, or the trees would suffer when in bloom from spring frosts. I think the culture should be greatly extended and encouraged, as the fruit can be used in so many ways, and owing to the number of good varieties, if a judicious selection is made, they may be made to cover a period of three months at least. I have not come across a soil that would not grow Plums. Even in the poor soil of the Bagshot sand formation they thrive well and fruit freely if the soil is well trenched and fairly manured. For flavour there is nothing to beat the Green Gage and Coe's Golden Drop, Purple Gage, Ickworth Impératrice, Jefferson, Kirke's, Denniston's Superb, Bryanston Gage, in fact, all the Gage varieties, are good.—R. Lloyd, *Brookwood Asylum, Brookwood, Surrey.*

The Plum as an orchard tree in the north is useless. The only exception is the Damson, which occasionally gives good crops. The Plum in the north requires a wall, and where this is afforded, other conditions being suitable, it well repays cultivation. Early Rivers is a very useful early Plum, excellent for cooking and preserving, a great cropper, and some of the best fruit when well ripened may be used for dessert. The kinds I find most useful and which do best here are Denyer's Victoria, Oullin's Golden, Lawson's Golden Gage, Denniston's Superb, Magnum Bonum, and Coe's Golden Drop. I have tried Kirke's and Jefferson, but they do not do well here ; they seem to require warmer summers than we usually have. I used to find these two kinds do well in the midland counties of England. Lawson's Golden Gage is one of our best sorts for dessert. It is an old kind, of medium size, deep yellow, and speckled with crimson next the sun, juicy, and nicely flavoured. The tree is hardy and robust. This fine old kind deserves to be more extensively planted ; it is still one of the best for out-door culture. The Green Gage is no doubt still our best flavoured Plum, but in the north it does not bear very freely. Denyer's Victoria is perhaps the best cropper, and when well thinned out and well ripened the best fruits may be used for dessert. Denniston's Superb is a useful Plum, of fine flavour, and comes into use here about the end of August. Oullin's Golden is a useful early Plum, excellent for dessert, and in use about the same time as Denniston's. No doubt some Plums do better than others in certain localities, but those mentioned above are, I find from experience, the kinds which do best in this district.—D. Melville, *Dunrobin Castle, Sutherland.*

As to the value of the Plum as an orchard tree in this locality, my opinion is that it would not pay, neither the climate nor the soil being suitable. As far as my experience of, now forty years, goes in Ross-shire and Inverness-shire, the only Plums that will prove at all profitable are the Victoria and the old variety of Damson. The best flavoured Plums I have are Jefferson, Green Gage, and Coe's Golden Drop.—Kenneth Stewart, *Dochfour.*

Our heavy clay subsoil is not favourable to the profitable culture of the Plum, and only a few hardy sorts can be depended on for regular bearing, such as Victoria, Diamond, Belgian Purple, Rivers' Early Prolific, Orleans, Jefferson, and Farleigh Prolific Damson. Our best flavoured Plums are Green Gage, Denniston's Superb,

Kirke's and Peach. The Plum seems most at home when growing in a good porous loam, resting on a gravel subsoil.—Thos. Lambert, *The Gardens, Burton Constable, Hull.*

The Plum as an orchard tree is certainly indispensable not only for cooking, but for dessert also. The Green Gage, Kirke's, and Coe's Golden Drop are valuable sorts, and should be grown extensively, according to the requirements. As a common Plum, suitable under almost any condition of growth, the Victoria, in my opinion, is superior to all others. A good loam is unquestionably the best kind of soil, and when planted on situations somewhat elevated above the valleys, the risk of loss from spring frosts is to some extent avoided. Orchard trees should be allowed to develop a good natural growth, more especially when they are planted in deep rich soils.—Geo. Thos. Miles, *Wycombe Abbey, Bucks.*

I consider the Plum a valuable tree for the orchard. During the last few years I have planted hundreds on very heavy soil and the result is good. The best new Plums I am growing are the Czar, Curlew, and Monarch. They carry good crops, and are very useful for sale or jam. The best flavoured Plums are Jefferson and the Gage Plums.—William Plester, *Elsenham Hall.*

The value of the Plum as an orchard tree depends more on the selection of the most suitable varieties than on any question of soil to all kinds of which, provided it is of fair quality and depth, Plums seem well able to adapt themselves. The trees grow most freely and last longest in a soil naturally moist, but this being most commonly found in low-lying places, there is always a great danger of injury to the flowers by frost in such positions, and a site of good elevation and sloping to the west would be more likely to make Plum growing profitable. In such places the culture deserves extension, as I find that the price paid for good Plums in the local market is generally remunerative, and in seasons of scarcity it runs high. The best varieties grown here, under purely orchard culture, are Belgian Purple, Orleans, Victoria, and Belle de Louvain; the last is one of the finest-looking Plums in existence. It never splits with the wet, and it will keep for days after ripening if picked when dry. These qualities combined with its size and colour, make it the most suitable of all Plums for marketing, while in flavour it is decidedly superior to most cooking varieties. Both this and Victoria are heavily laden with fruit this year, and have had to be propped up to prevent breakage. The orchard culture of Green Gages is not profitable here, for what with spring frosts and the bullfinches good crops are much rarer than total failures. The old Prune Plum of the west of England orchards should be tried, as it is a most profitable variety where it does well. I do not meet with it in this neighbourhood, and whether it has been tried or not I cannot say. Neither Kirke's, Coe's Golden Drop, nor Washington succeed in the orchard; the two former have proved bad growers here, and the latter, though it grows freely enough, is a light cropper. A list of the best flavoured Plums grown here would include Green Gage, Huling's Superb, Jefferson, Kirke's, Reine Claude de Bavay (this only in a fine season and grown on a wall; I find it useless in the orchard), Coe's Golden Drop (when allowed to hang late), and Angelina Burdett, and to these I would add Denniston's Superb. These varieties should bridge the Plum season.—J. C. Tallack, *Livermere Park, Bury St. Edmunds.*

The Plum is cultivated extensively in this neighbourhood by landlord, farmer, and cottager alike, but although the crops are generally good, bad markets bring its value as a fruit to a low level. The geological formation is limestone, yielding a heavy loam inclined to clay. In this the Plum luxuriates, and if the plants (bushes or standards) are allowed unrestricted growth, heavy yields are obtained the second or third year after being planted. Some trees I planted four years ago are now carrying several stones of fruit each. If heavy loam can be found in the vicinity of good markets, nothing, I am convinced, would be more profitable than free-bearing varieties of Plums. My experience of new varieties is very limited, and the plants I have are too young to enable me to form an opinion of their value as fruit producers. For flavour, Reine Claude de Bavay takes the first place; Coe's Golden Drop, Jefferson, the Gages, Kirke's, and Victoria are good dessert in the order of merit given, and, besides, all are fairly prolific sorts. — J. Riddell, *Castle Howard Gardens.*

The value of the Plum as an orchard tree is very great, and in my opinion Plum-culture requires extension. In my younger days I lived in the noted Pershore Plum district, and had a good insight into the value of the Plum as an orchard tree. The chief drawback in those days was heavy gluts of fruit. This was caused through a very limited number of varieties being grown, early and late kinds not being sufficiently cultivated. The best soil is a light loam, and if heavy it must be well drained. In planting orchard trees it is advisable to get a suitable stock for the soil, as on some stocks the trees only fruit sparingly and make gross growths. Doubtless a trial of varieties on a small scale would be advisable before planting orchards of these fruits. In Worcestershire and Herefordshire immense quantities of Plums are grown, but mostly such kinds as Pershore Egg and Gisborne's. Doubtless the soil would grow choicer kinds equally well. Such varieties as Rivers' Early Prolific was a great gain to large growers, as this kind, though small, is in advance of others, and being a good cropper, rarely failing, is more valuable. For flavour I still think many of the old kinds difficult to beat. The old Green Gage still heads the list, this being one of the best flavoured fruits grown. Guthrie's Gage is also good. One of the best of the dessert kinds is Jefferson, a valuable wall Plum and a good cropper. McLaughlin's Gage is also worth mention for good flavour. Reine Claude de Bavay, Transparent Gage, Kirke's, Late Rivers, Coe's Golden Drop, Lawson's Golden and Ickworth Impératrice for late use are all noted for good flavour. There are others of larger size and more showy, but the above are the best in this soil. —G. Wythes, *Syon House Gardens, Brentford.*

The Plum here as an orchard tree I consider valuable, and its culture deserves extending. Near here Plums mostly do well and crop heavily. New varieties I have had no experience with. The best flavoured are the Gages, Washington, Jefferson, and Coe's Golden Drop.—Wm. Andrews, *Treyothnan, Cornwall.*

Plums where planted have been very profitable, Denyer's Victoria and Magnum Bonum being most grown and inquired for. Damsons fruit heavily; the soil is a heavy loam with clay subsoil. I have not had much experience of the new ones, except Grand Duke, which I think will be more grown as its merits become better known. Coe's Golden Drop is the best flavoured, then follow Green Gage, Jefferson, Washington, Oullin's Golden Gage, and Kirke's.—J. D. Nauscawen, *Whiteway, Chudleigh.*

The Plum succeeds here admirably as an orchard tree; the soil, a strong loam, on the lias formation. The trees grow to a large size, bearing heavy crops in favourable seasons. Both here and in the adjoining Evesham district there is a large acreage of Plums, which is being yearly increased. The best for flavour I know are Transparent Gage, Jefferson, Golden Drop, Kirke's, Violette Hâtive, Rivers' Early Prolific, and Czar. —J. Cleare, *Toddington, Winchcomb.*

I find the Plum as an orchard tree more productive and less liable to disease than Apples or Pears on light black sandy soil. The varieties I am growing in quantity are Victoria, Pershore, Diamond, and Rivers' Early Prolific. I wish I had more of the last-named, a sure bearer and good all round. I consider Kirke's, Violette Hâtive and Green Gage when properly ripened the best Plums. Unfortunately, Kirke's is not a free bearer. —Robert Maher, *Tattenden Park, Newbury.*

The value of the Plum as an orchard tree cannot well be over-estimated when suitable varieties are planted in good loamy soil, inclining to be heavy rather than otherwise, and resting on a gravelly subsoil, and protected from the north and east by a row or two of forest trees—say Spruce—sufficiently high to afford the necessary protection to the trees when in flower from cutting winds. As yet I have not had any practical experience of the Japanese and American Plums. I can, however, speak highly of Archduke, Sultan, Grand Duke, Belgian Purple, Early Prolific, Monarch, The Czar, Diamond, Pond's Seedling, and Victoria for walls, and for the same sheltered situation the following dessert varieties: Old Green Gage, Guthrie's Late Gage, Jefferson, Kirke's, Denniston's Superb, Bryanston Gage, and Coe's Golden Drop. Of Damsons last August I saw young trees of Shropshire or Michaelmas Damson bearing immense crops of fruit. As regards the best flavoured Plums, I have yet to learn the name of one that will come up to, not to say beat, the old Green Gage.—H. W. Ward, *Longford Castle, Salisbury.*

The Plum in this district would be valuable if cultivated more largely, but then the drawback would be a really good market for the fruit. The Victoria is grown most extensively, and is the most popular. Magnum Bonum and Orleans also are largely grown, and seldom fail to give a good crop. The soil is a retentive loam, with subsoil of green and yellow sand, chalk and brash. Denniston's Superb, Coe's Golden Drop, Green Gage, Jefferson, Purple Gage, Peach Plum, Reine Claude de Bavay, Kirke's, Angelina Burdett are, I consider, the best flavoured varieties I have. All these are good with me, and seldom fail to give a good crop.—W. A. Cook, *Compton Bassett, Wilts.*

Plums answer admirably on our light sandy soil, resting on the old red sandstone, and their culture might with advantage be considerably extended about here, proving that the trees will crop freely on light soil as well as on a heavy one. At the same time I strongly advocate the bush system of growing Plums, as they pay the best and quickest. One year I realised £176 from an acre of Victoria grown as bushes. Neither the Japanese nor American Plums have been quite satisfactory here yet. Of the former, Satsuma has done the best, and Mariana of the latter. Amongst new European varieties, Monarch, Archduke, Late Transparent, and Smith's Purple Prolific have proved decided acquisitions; the two first and the last named should prove valuable market Plums, and are worth a place in every garden, large or small. Grand Duke also promises to be of sterling merit. I think the following varieties possess the best flavour: Golden Transparent and Oullin's Golden Gages, Jefferson, Kirke's, Coe's Golden Drop, Huling's Superb, and the old Green Gage.—S. T. Wright, *Glewston Court Gardens, Ross, Hereford.*

The Plum is not much cultivated around this district as an orchard tree, so I cannot speak as to its value in that respect. The Victoria, Magnum Bonum, Red and even the old Green Gage do well as standards in a cottage garden near here, that being the only case I know of. The soil around here is a very sandy loam with a subsoil of sand. The following I consider the best flavoured Plums: Belle de Septembre, though classed as a cooking one, is excellent for dessert when quite ripe, Coe's Golden Drop, Denniston's Superb, Green Gage, Jefferson, Reine Claude de Bavay, and Bicton. I cannot speak about new varieties of Plums.—J. Mayne, *Bicton.*

The Plum is admirably adapted as an orchard tree, and it certainly deserves extension under this form if a market could be found for the fruit. The Plum would be more fruitful than it is in some gardens if grown as a standard than as a bush. Under this latter form so many people cut or prune the trees in too much to ensure good crops of fruit, whilst with standards this would not be the case. Nor do the trees grow exceptionally large. After the first year or two, when the tree has to be pruned to get it into shape and so form a well-balanced head, strong growth is checked, and the tree produces short, stubby growth

studded with fruit blossom. It is only when the trees are kept cut in and grown in loose, over-manured soil that they form gross, unfruitful growth. Treated to a firm root run, the surface not being dug, and with suitable soil, the Plum is sure to succeed. A well-drained, sandy loam, where a fair proportion of lime is present, will grow Plums well. The Plum also succeeds well on limestone or calcareous soils. It must have free exposure, and not be planted under the shadow of forest trees. As regards our new English-raised varieties, Monarch is the latest new variety that I am acquainted with. This is well worth extended culture, having proved itself to be a most valuable cooking Plum, coming into use after most other varieties are past. For flavour I give the preference to Jefferson, Oullin's Golden, Green Gage, Denniston's Superb, Purple Gage, Coe's Golden Drop, Kirke's, De Montfort, Ickworth Impératrice, McLaughlin's Gage and Angelina Burdett. As the best six varieties I should select Jefferson, Oullin's Golden, McLaughlin's Gage, Green Gage, Kirkes', and Coe's Golden Drop.—A. YOUNG, *Abberley Hall Gardens, Stourport.*

THE HEXHAM NURSERIES.

HEXHAM, an old northern town, has a long and eventful history bound up with the perpetual Border warfare of centuries gone by. It is now a centre of considerable activity, being about midway between Newcastle and Carlisle, and the chief market or distributing centre of the products of the rich Tyne valley. Here about a century ago was started by Mr. Robson the nursery that in latter years Messrs. Fell have so greatly extended till it embraces most branches of the nursery trade, special prominence being given to the raising and distribution of forest trees, which we saw in great numbers in their several stages, from the tiny seedlings to the young, sturdy clean-grown specimens ready for the present planting season. The ground devoted to these is at a considerable elevation above the town, and naturally ensures a hard and healthy growth. Lower down this hill is a large area devoted to fruit trees and Roses, where we noted enormous breadths of the now popular Whinham's Industry Gooseberry, which originated in this county at Morpeth. The trade in this particular kind is enormous, and is growing still. The stock for this season's distribution from here alone totals 200,000, and out of this number orders have already been booked for 150,000. In the district as well it is largely grown as a market fruit, in an average season about 50 tons of this variety being despatched from Hexham. The Hessle Pear, too, is another popular market kind extensively grown in the district, as many as 80 tons of it having been sent off in one season during recent years. Our attention was drawn to a large breadth of a new Plum stock, which having proved satisfactory in a small way is now undergoing an extensive trial. It is an American wild, or half wild, Plum named Mariana, and resembles the Cherry Plum somewhat in style and appearance of growth and fruit. Plums worked upon it commence bearing in their second year, Rivers' Early being most noticeable in this respect, as it carried quite a large crop. A point that will tell still more strongly in favour of this stock is that it strikes readily from cuttings.

Ornamental summer leafing trees, especially distinct varieties of our own native trees, receive much attention in this nursery. There is among them quite a number of beautiful forms that deserve more attention from planters who, unfortunately, generally ignore them, and plant instead very doubtful evergreens, with deplorable results. Willows for the water-side are numerous, and some of them rival the hardy Bamboos in lightness of eafage and slender graceful growth, whilst others with highly coloured bark give, when well planted, a brilliant glow of colour during the dullest and darkest days of the year. Besides well-known forms we saw a broad-leaved variety of the Babylonian Weeping Willow, its weeping habit quite as pronounced as that of the old S. babylonica, but the leaves were altogether larger, both longer and broader. Another handsome variety is that named Wentworth Seedling. It is clearly a form of the Cardinal Willow, but Messrs. Fell say the colour of its bark is of a deeper red, which colour, of course, was not fully developed at the time we saw it. Poplars are extensively grown, and the new Canadian Poplar is highly praised as a town tree by Messrs. Fell, who planted Scotland Street, Glasgow, with it, and there it has grown splendidly. P. Bolleana nivea is also a good town tree, with large leaves of a leathery texture and white on their under-surfaces, though less so than those of the common Abele Poplar. P. tremula pendula we also saw. It has a wider branch-spread, and makes a more irregular, informal head than the variety that comes from the Continent under the name of Parasol de St. Julien. The old English narrow-leaved Elm, as growing here, is a pretty, small-leaved kind, worthy of note, and several varieties of Ash are deserving of mention, especially the



Hemerocallis flava.

entire-leaved variety (Fraxinus monophylla), which differs to such an extent from all other forms, that one might feel disposed to dispute its relationship but for the unmistakable proof furnished by its wood and buds. It is a rapid and strong-growing tree, and has large, broad, somewhat heart-shaped leaves, deeply serrated along their edges. The Walnut-leaved Ash is a fine form, distinguished, as the name would imply, by having leaves much like those of a Walnut, whilst F. oxyphylla is charming in an opposite way, its leaves being narrow, small, gracefully Fern-like, and of a shining glossy green as though polished. The Cut-leaved Ash, too, has a distinct appearance, and looks like a great Pteris Fern. A Birch lately bought in under the name of new American Cut-leaved shows marked affinity to what we grow as Young's Weeping, and in this respect complaint was made of the misleading character of several popular American names which have been coined and used to suggest new forms, which, when purchased, turn out to be things we have in abundance. Such reprehensible practices are opposed to fair dealing. We were shown a batch of the Venetian Sumach which was bought from America under some such a name as "New Purple Wig Tree." Weir's Cut-leaved Maple is another charming tree, having a distinctly weeping tendency and deeply-cut leaves prettily adorning its long, slender branches. Among the Pyrus and Sorbus tribe, also well represented, we noted the Swedish Service Tree, which fruits freely, and has pinnate leaves terminated by a large entire leaflet. Genista tinctoria elata we saw a large group of, but just passing out of bloom. It is a tall form of the native Dyer's Weed, and well merits a place in gardens, as, like the type, it wants no special position, but is a brilliant and showy, late-flowering member of the Broom family. It grows 2 feet or more in height, and flowers profusely the entire length of the shoots.

In this northern district Messrs. Fell report considerable injury to the conventional garden evergreens. Even Lawson's Cypress suffered to a considerable extent, and not a few were killed outright. Phillyrea Vilmoriniana did not prove hardy, but Osmanthus ilicifolius came through the cold untouched, and is likely to receive much more attention in consequence. Carnations also grow well at Hexham. We saw large beds of good self kinds planted in the open quarters. Hardy flowers, too, fill a considerable space, and when we saw them, Sunflowers, Coneflowers, Asters, and Chrysanthemums were still bright.

GARDEN FLORA.

PLATE 1041.

DAY LILIES.

(WITH A COLOURED PLATE OF HEMEROCALLIS AURANTIACA MAJOR.*)

NOT many species of Day Lily are grown in gardens, but the few we have are all first-rate hardy flowering plants, and their blooming season is long-continued, commencing quite early in the spring and lasting till quite the end of summer, whilst it is by no means unusual for the early-flowering species to give secondary spikes during the autumn months.

Hemerocallis aurantiaca major, the subject of the coloured plate, is a new and most noteworthy addition to the Day Lily family. It is certainly one of the finest new hardy plants obtained within recent years. It was first shown this season by Messrs. R. Wallace and Co., of Colchester, at the R.H S. meeting held at the Drill Hall on July 9, when the plant was awarded a first-first certificate. It is said to have originated in Japan, where it was first observed growing in a mass of Iris Kæmpferi, which points to the possibility of its being a chance seedling, perhaps the result of an accidental cross. Whatever its origin, there can be no question as to its value and, above all, its great distinctness and rich colour. All the Day Lilies are plants of hardy and robust growth, and this desirable quality is, if anything, accentuated in the new kind under notice, which partakes most of the character of Hemerocallis fulva (syn., H. disticha), all the broad-leaved and more or less tawny-flowered forms being placed under this species as varieties of it. The flowers of Hemerocallis disticha are of an orange-brown colour, and a two-forked branching of the flower-spike is another characteristic of it, besides the extra broad strap-like leaves, which impart to it an aspect of rich luxuriance even in growth alone. All these distinguishing traits are readily apparent in the new kind now figured, and it there-

* Drawn for THE GARDEN by H. G. Moon in Messrs. Wallace's nursery at Colchester. Lithographed and printed by Guillaume Severeyns.



HEMEROCALLIS AURANTIACA MAJOR.





fore may be a seedling. The present name has been given to it by Mr. Baker, of Kew. In leafage this new kind is handsome, a decided glaucous tinge overlying the deep green body colour, and the two-forked flowered arrangement is also seen in the spike figured. The rich apricot colour of the flowers is also faithfully shown in the plate, but the first flowers having fallen, the one represented is not full-sized, nor does it show the great breadth of petal manifest in earlier blooms. The flowers open out widely, the petals reflexing to a marked extent, whilst they are of such surprising substance as to appear quite thick and fleshy. The flower-scape, too, is extra stout, holding the flowers boldly up above the ample tufts of arching leaves. The plant is now being distributed, and no doubt ere long will be plentiful in the gardens



Hemerocallis fulva fl.-pl.

of all those who grow the best hardy flowers. Flowers of it were also shown at succeeding meetings at the Drill Hall, thus proving its value for materially prolonging the season of bloom. Day Lilies are also useful for cutting, being pleasingly fragrant and developing their buds even in a cut state. The only other Day Lily that has been figured in The Garden is H. Dumortieri, a plate of which will be found in Vol. xxxi., p. 280, accompanied by a good descriptive article of all the other kinds in cultivation.

Chrysanthemum Miss Rose.—A group of this single-flowered Chrysanthemum is one of the finest things to be seen at Kew now. The plants are dwarf, some of them not 2 feet high, and all veritable sheaves of bloom, completely covering and hiding the shoots. Anything more delightful among Chrysanthemums could hardly be found. The flowers are much smaller than those of most single-flowered kinds and of a delicate blush colour.

The Week's Work.

KITCHEN GARDEN.

Successional Cucumbers.—Where these were planted out in October, and are expected to afford a supply of fruit in January and February, when the actual winter plants are on the wane, great care and regularity will now be needed in their treatment. Beware of too much fire heat, as the short sunless days of December prevent the possibility of using the syringe to any extent over the foliage, and on this account red spider or thrips must not be allowed a footing. Some growers fancy that a brisk heat from hot-water pipes is necessary in winter in order to atone for the deficiency that is produced by the sun's rays, but it is a fact that winter Cucumbers suffer less soon from a low night temperature than do plants which do their work in spring, when bright sunshine raises the mercury to 85° or 90°. Where the plants are located close to the hot-water pipes it is a good plan to cover the latter with strips of common list or even old portions of garden mats, and to soak them daily in order to modify the heat at that particular point, and thereby lessen the liability to insect attacks. Where the roof is furnished with roller blinds they must now be brought into use, especially on cold windy nights, as these if composed of good stout material are the best possible economisers of fire heat the Cucumber grower can have. On stormy days I have sometimes allowed the blinds to remain down, the plants suffering far less from partial darkness for a few hours than from the complete dispersion of atmospheric moisture brought about by high and arid winds. By this date growth will have proceeded some little distance up the main trellis and the side laterals will need a tie here and there to keep them in position, the great aim being to leave no more leaves than can be fully exposed to sunlight and air. These plants will show surface roots less frequently and in smaller quantities than the established winter fruiters; consequently top-dressings must be few and far between, it being much better for the general well-being of the plants that a few roots should remain exposed than by undue additions of loam to render the bed sour and unwholesome. Manure water must be applied with great judgment in winter, growth never being sufficiently stout and leathery to assimilate strong doses of liquid or liberal sprinklings of artificial fertilisers. The best way is to give the former of the colour of pale ale for the period of a fortnight, then to abandon its use for a similar period, resuming it again in due course, and where chemical manure is used to give a moderate surface sprinkling every three weeks. Liquid from the farm or stable yard should be clarified, as if thick it is apt to clog the border and do more harm than good. Keep up as near as possible a night figure of 60° in time of frost, allowing one of 65° when such can be maintained by mere lukewarmth in the pipes. Admit a little fresh air at 10 a.m. on warm sunny days and withdraw it at 1 p.m., damping the floors and walls with tepid water. In smoky districts wash the roof glass once in three weeks, and exercise patience until lengthening days and increased solar heat in January induce renewed activity and greater fertility. Should wireworm be troublesome, trap them by spreading fresh horse droppings over the surface of the border.

November Cabbages.—If a sowing of Cocoa-nut, Wheeler's Imperial, or St. John's Day was made early in June, nice white heads will now be plentiful; these of course are of better quality than ordinary sprouts, the result of old spring Cabbage stumps being headed back, and their flavour will have been improved by exposure to early frosts. These had better now be used freely, as they will not stand a great deal of frost, particularly should such occur immediately after heavy rains, and using these will reserve the more hardy Colewort, which in mild weather will continue to increase in size even in December. The advanced condition of many spring Cabbages at the present time, owing to the extra warmth of September, plainly indicates the folly of sowing early, especially in warm gardens in the home counties. Mine were not sown till the very end of July, and they are too large and sappy to please me. Some gardeners check growth at this date by thrusting in the spade close to the plant, thereby severing the roots low down, but I sometimes think that the remedy is as bad as the disease. Where this is done the soil must be well firmed round each plant afterwards.

Sowing Tomatoes.—Those who wish for an early crop of Tomatoes, and have not by them a batch of plants raised from cuttings, may sow now, using small pots in preference to pans, and putting about three seeds into each, finally drawing out all but the strongest plant. Keep in a temperature of 60° close to the roof-glass, and be very sparing in the use of water both before and after germination, as Tomatoes in a young state are most impatient of moisture at this season. These if well attended to and kept stocky will bear fruit at the end of March. On no account use the syringe overhead, as this often causes the young seedlings to damp off wholesale.

Covering Globe Artichokes.—The somewhat severe frosts which have already occurred should remind us of the necessity of protecting the crowns of this popular vegetable. Some gardeners do not believe in the practice, but the fact is that even on heavy soils Artichokes are safer with a covering, provided it be of a loose, shaggy nature. To mulch with farmyard manure in an advanced state of decomposition, as some do, is simply to

court disaster, as this soon becomes soddened, and in the event of severe and long-continued frost, is converted into an icy mass which is bound to paralyse, if not finally ruin, the crowns and roots. What I advocate is a good covering just now of dry Bracken, or, failing this, light strawy litter, working it well in amongst the remaining growths, renewing the covering again in January. Where so many err is in postponing covering until frost has actually injured the crowns, which is done far sooner on heavy soils than many people are aware of. In low-lying situations where Artichokes winter badly the safest plan is to sever a number of young side growths in autumn and pot them up, keeping them in a somewhat dry, airy pit, where a covering of litter can be given in case of severe weather. Let the pit be free from drip and keep the lights tilted over the plants, as if rain soaks into the centres it very often causes rot in a short time. Potting up of the crowns ought always to be done in October, but where, through pressure of work, time could not then be spared it is not yet too late. Jerusalem Artichokes should now have their growths cut off a few inches from the ground, as although these usually grow in an unimportant part of the kitchen garden, the stems and withered foliage are anything but attractive. Let none but the best shaped tubers be saved for seed, this being the only way to keep the stock select.

EARLY SEAKALE.—It is now high time all who wish for Seakale in fairly good time should get a batch of crowns into warmth. There is really very little gain in trying to push badly ripened crowns unduly, as they are very obstinate and the produce is weak and watery. Seakale this season made a prolonged growth owing to the September heat following rain. Those who acted according to advice given in spring and planted a sunny border with thongs for early work will now reap the advantage. No better place can be chosen than the Mushroom house, where in a temperature of 55° the growth is sturdy and the flavour good. I have a bricked-in space between two beds where I bring on the first two batches, boards being laid over the top to husband all the heat possible. I find that the warmth from the two beds urges the roots into activity in a minimum of time. Those who require a dish or two specially early may accomplish their object by putting half a dozen crowns in a 12-inch pot and placing them over the pipes in the Pine stove or similar warm structure, well soaking the soil and covering with inverted pots and old bags. It will be well to lift a good quantity of crowns now and to lay them in behind a north wall, covering them with 6 inches of leaf-mould. This preparatory process ensures a quicker growth when placed in heat. The Lily-white is certainly finer than the old variety, but in my opinion does not force quite so readily in the early part of the season. Its colour is very taking when dished up. I always soak the Seakale with warm water after being plunged, and keep it sufficiently moist by overhead syringing every other morning. This process also keeps the crowns nice and moist, and the steam engendered therefrom is helpful to growth.

MINT.—This may be thought an early date for boxing Mint for forcing in Peach houses and vineries, but I find that by so doing it gets well established in the soil before being started into growth, and that the latter is in consequence more abundant. Plant in fairly deep boxes, as it is a very free rooter, and when limited for root room soon gets starved and grows weakly. Mix a fair amount of good rotten manure with the soil when boxing it. J. CRAWFORD.

FRUIT HOUSES.

POT VINES.—The season for ripening the Vines in pots was all one could desire, and no time should be lost in starting them so as to get ripe fruit early next May. If the canes are home-grown, the cultivator will ere this have prepared them for early planting. If purchased, there should be no delay in selecting the same, preference being given to short-jointed, well-ripened wood. For general culture I do not think the Hamburgh can be beaten as a good forcing black variety, and Foster's Seedling as a white, the former being the more reliable. Many growers have to use structures not well adapted for early forcing, but in all cases a small pit or low span-roof is most suitable, as later on, when the fruit is setting, we may expect severe weather, and every ray of sunlight will be necessary to get perfect fruit. By growing Vines in pots, hard forcing may be resorted to, the Vines being worthless after forcing. I admit a second crop can be secured, but young plants are most reliable. Of late years I have grown fewer Vines in pots, planting out the canes in narrow borders. By this means I have secured more bunches with less trouble in watering, and the treatment is much the same. I find, however, that the pot Vines break sooner, so that for hard forcing they are more reliable. In placing the canes in their forcing quarters, if the calendar advice (p. 263) was followed, no pruning will be necessary; indeed, pruning or shortening of lateral growths at this season will cause the Vines to bleed badly as soon as the sap begins to ascend. If pruning has been neglected, it will be better now to leave the canes full length and disbud later on to the required distance. Young canes will not need painting or much cleaning if free of insect pests, but if the least trace of mealy bug be on the Vines, wash thoroughly with tepid water and soft soap, with a small quantity of paraffin mixed with the soap to make it soluble. The roots should get assistance at starting, plunging the pots in a bed of fresh leaves and stable litter. This should be placed in a heap for a week or two previously and got into condition for plunging. In fresh material the pots should only be partially plunged at first, placing lower in a week or two and adding new material as the older sinks. Previous to introducing the Vines it is well to thoroughly cleanse walls and glass and make as neat as possible, and when the canes are in their quarters, to bend down towards the front of the house, giving each a sharp curve to induce the bottom buds to break freely. With heating material as advised, less syringing will be necessary, as the moisture from the bed will assist the Vines. Where there are only hot-water pipes, syringing several times a day will be necessary, but in any case the walls, floor, and beds should be damped over early in the morning and at mid-day to maintain a genial temperature. The thermometer may range from 50° to 55° at night, with 10° higher by day. Ventilation for some weeks need not be given, as a good rise of temperature during the day will be beneficial. Much the same treatment is necessary with Vines planted out. They, too, are greatly assisted by warmth at the roots when starting. Very little water at the roots will be required for a time in the case of pot Vines. A thorough watering with tepid water at the start will suffice for both pot and planted-out canes for some weeks, but when water is given it should be liberally supplied.

EARLY PERMANENT FORCED VINES. — These should be prepared for the start if ripe Grapes are wanted in May. Thomson's styptic should be applied to the cut portion of the canes before starting, as if allowed to bleed when breaking they lose vigour, and at that season bleeding is difficult to stop. The favourable season for ripening should tell on early forced canes, as the wood should be all one may desire. The end of November or first week in December is a good time to start, and Vines in good condition may get a temperature only slightly lower than advised for pot plants. In this matter the grower must take the outside temperature into account, as in mild weather hard-and-fast rules need not be observed. The same remarks apply as regards ventilation. Previous to starting the Vines it is well to examine the border, and as the earliest should be inside, moisture, if necessary, should be given at a temperature of 70°. This passing through the soil will soon be cooled down, and in all cases it is advisable to close the house a few days previous to watering. The Vines will be greatly benefited if a bed of warm leaves and litter can be placed on the surface to start the roots. Watering should be done before placing the fermenting material in position. Outside borders are not advisable for hard forced Vines and are now rarely made, but in case the roots are outside, a good depth of warm material should be employed, and shutters or corrugated iron used as a top covering to throw off heavy rains or snow. Daily syringing as advised above and other similar details will be requisite, and it may be necessary to top-dress the borders with bone-meal or good yellow loam, much, however, depending upon the condition of the Vines. If hard forced, the aids named above can well be given later on if desired or in liquid form.

MIDSEASON GRAPES.—Pruning, cleansing and preparation for the season named will now be necessary in this department. The term may be applied to Vines which produce fruit from June to September. There is no gain in delaying pruning after the fall of the leaf; indeed, a long rest will be beneficial and the necessary winter work may be commenced, as if done now there is less fear of bleeding and the houses present a much neater appearance. All loose bark should be rubbed off old Vines, skinning being avoided, cleansing with soft soap and tepid water, and with a brush well working into the knotty portions of the Vines. Painting is also necessary, and the old, but reliable Gishurst compound is still one of the best insecticides mixed with a little clay to make it adhere to the rods. For mildew, add sulphur liberally to the Gishurst and well limewash the walls with fresh lime, adding sulphur also, as mildew, once it obtains a hold, reappears each season if not thoroughly eradicated at the winter cleansing. Where mealy bug exists, too much care cannot be observed at the cleansing, soluble paraffin being a safe remedy when carefully applied. I prefer to use it as a wash where it can be used in suitable quantities. In pruning these Vines it is not well to wait until the last leaf has fallen, as often at the points of the laterals the small late growths remain green. Hard pruning of certain kinds, such as Gros Colman, must be avoided, and in all such cases it is advisable to lay in new growths or leaders whenever possible. Young canes left last year should be shortened according to their strength, strong canes being dealt with liberally, the weaker ones cut back more. Borders should be top-dressed if necessary, taking away all loose surface soil, getting close down to the fibrous roots, and giving a dressing of rich compost in which bone-meal, mortar rubble, and wood ashes predominate.

LATE GRAPES.—This is a serious time for Grapes hanging. During wet days or foggy weather very little air will be required, and fire-heat will be necessary to dispel damp. In fine weather air freely, with warmth as advised, and give the Vines all the light possible by removing decaying leaves. At least once a week go over the bunches, removing all decaying berries. If other plants are wintered in houses with Grapes hanging, any watering required should be done early in the day. Water as sparingly as possible; in fact remove all plants unless they cannot be housed elsewhere. Grapes at this date often shrivel badly if the borders are kept too dry, and my remarks as regards moisture are not intended to convey that the Vine roots must be kept dry—indeed, the reverse. In case of dry borders give a thorough soaking as early as possible on a fine day to allow the moisture to dry up by nightfall, and ventilate freely during the day. Late large Grapes, such as Gros Colman, need more care than other varieties if at all thick in the bunch; indeed, they well repay removal of berries wedged into each other. Open bunches keep best, so that in cutting ripe fruit this should be considered. Outside borders in which Vines carrying late Grapes are should be covered with dry leaves or shutters. If the former, they must be merely put on as a protection against heavy rains. I do not advise decayed manure, the borders being better left uncovered than covered with wet materials. G. WYTHES.

Kitchen Garden.

PREPARING FOR WINTER.

With the leaves falling in such numbers all around us, we are forcibly reminded of the approach of winter, and should this visit us soon, let it not find us unprepared. There are many things that can be done while the weather is mild that may be of great service in forwarding work should severe weather set in at an early date. For example, some of the Asparagus beds from which it is intended to lift roots for forcing and from which the summer's growth has been removed ought to have a dressing of littery manure or half-decayed leaves placed over them to the thickness of about 9 inches to ward off the frost. By so doing much inconvenience is avoided during a long spell of severe weather, as the roots can then be lifted at any time when required, for it is seldom that frost penetrates far into such material. Where the ground is stiff, and therefore very retentive, this covering will prevent the rains from making it pasty, so that digging may be proceeded with as soon as the roots are lifted. Rhubarb has now shed its leaves ; that intended for forcing may therefore be lifted and stored close together, covering the roots sufficiently with litter to ward off any frost. By so doing there will be but little difficulty experienced in being able to get them at any time they are required for placing in the forcing house. Seakale will soon be shedding its leaves, and the roots may be lifted and laid in on a north border and afterwards covered with litter of sufficient thickness to ward off the frost. I find Lily White the best for early forcing, as it grows much more quickly than the old form. To have this vegetable of the finest possible flavour, it should be grown without the aid of fire-heat ; therefore those who require early supplies should take up roots as soon as the leaves separate freely from the crowns and plant them thickly in a warm cellar. Here they will grow gently, the growth being both crisp and tender. Rhubarb also forced in this way is far more tender than that grown more quickly in heated structures. A portion of the crop of Chicory should also be taken up and prepared ready for introducing into a place to blanch.

Many people lost their Globe Artichokes last spring owing to the severity of the frost, and those saved were so injured in many instances that it took the whole summer for them to recover. It may be well, therefore, to remind such of the necessity of being well prepared by the time frost sets in. Globe Artichokes are not difficult to grow provided they are treated properly. Not being perfectly hardy in this country, they need protection during winter, particularly on cold, heavy ground where the frost penetrates to a far greater depth than it does on light, sandy soil. Material ought to be at hand in readiness in case frost should set in. If the ground between and round the plants is covered with leaves to the thickness of about 6 inches, it is seldom that frost will harm them. On the first approach of severe weather the roots also should be covered with rough litter to prevent the ground underneath them from getting frozen. It does not much signify about the foliage being killed so long as the hearts of the suckers are kept alive, as leaves will soon be produced again on the first approach of warm weather in April. Anyone desirous of having an early supply may take off some of the suckers at the present time and plant them in pots, growing them on in a frame through the winter and planting out in spring. The stems of Jerusalem Artichokes may now be cut down, and after lifting a supply for present use, the rest should be covered with litter of some kind to prevent the frost from penetrating the ground that future lots may be lifted as required during wintry weather. I have always found that these, Parsnips, and Turnips are much more appreciated when lifted fresh. Lettuce in the open ground that are large enough for use ought to have some boards placed round them to form a temporary frame on which to rest the lights when the first approach of severe weather presents itself. Where these cannot be afforded, sticks bent over the beds to support mats or canvas covers will be found to answer very well, as they will ward off 10° or 12°. So far the present month, with the exception of two days, has been wet, and more than 2½ inches of rain has fallen. Others who are situated in positions like myself where the ground is heavy will understand the advantage of having all vacant ground dug as opportunities present themselves. I do not advocate getting on such land in wet weather ; neither do I advise digging where it is intended to sow very early crops, for the looser such ground lies at this time of the year the more moisture will it hold. But where sowing or planting is deferred till the end of March or early in April, then I recommend that the ground be thrown up roughly, in order that frost and air may penetrate as deeply as possible. H. C. P.

Tomato Yellow King.—I have grown this variety this year and find it an excellent cropper, the fruit of rather delicate flavour, flesh firm, and juicy. It is a wonder the yellow-fruited kinds are not more generally grown. It has been said that they do not crop well, but I have found this kind quite up to the average, each fruit weighing from 10 oz. to 14 oz.—W. H. S., *Comberford Hall, Tamworth.*

Potting Cauliflower plants. — The old method of potting up a number of Cauliflowers for early March planting has much to recommend it, as, though plants raised in heat early in the year will be a little later than the autumn plants, the latter have more size. Even a short time in May, at a season vegetables are scarce, is of great value to the cultivator who has a large supply of vegetables to provide. I admit there are at times serious losses if the plants are not placed in frames, but much depends upon the way they are sheltered, also the material potted up. Short, sturdy plants should be selected and no coddling in fine weather given. The plants will stand much exposure if grown thinly from the start. Damp is equally as injurious as frost, so that a dry place is important. Having a great quantity of vegetables to supply in the early spring, I find the potted-up plants most reliable ; they can be planted out without shelter in March and earlier in mild winters. By sowing in heat a succession is maintained.—G. W. S.

Large Carrots.—I was glad to see "A. D." (p. 376) drawing attention to this subject, for the prevailing idea now-a-days is to have everything large, and in many instances at the expense of quality. Large flowers, large fruit and large vegetables seem to be all the rage. No doubt we all admire well-grown specimens of all kinds, and if these have quality combined with size, there is no reason why preference should not be given to them, but how seldom is this the case. It is more the exception than the rule to find the largest specimens having the finest quality. Formerly it was a rule with gardeners to sow Carrots some time during the month of April to produce roots for lifting and storing for winter use. In all well-cultivated gardens this idea, however, no longer finds favour, for the roots produced from such sowings often split, owing to heavy rains in August, particularly on heavy soil, the greater portion of the crop being thus rendered useless. Instead of sowing the main crop in April I now sow in June, and for a late supply towards the end of July. I am well aware that such late sowing would not answer in all places, but where large supplies have to be obtained from a limited space and two crops can be taken instead of one, there is certainly a great advantage, and under good cultivation roots sufficiently large for the requirements of a gentleman's table can easily be obtained if the quick-growing kinds are sown. New Intermediate, Matchless and others of that class are far more useful than some of the older forms if the seed is sown during the month of June, and may be relied upon to give general satisfaction where others fail, even in districts where the Carrot fly and wireworm are troublesome.—H. C. P.

Savoy Cabbages.—So unduly early do we as a rule sow seed of these valuable hardy Cabbages, that they turn in during the autumn and are ready for use long before they are required. Too much attention has been given to the production of very early sorts which really are not wanted, because they turn in when Cauliflowers, early Brussels Sprouts, young Cabbages, Coleworts, &c., are plentiful, as well as late Runner Beans, Marrows, and other vegetables. It is not a matter of tradition, but of actual fact, that the tenderest eating of Savoy Cabbages is undoubtedly improved in flavour and texture by exposure to moderate frost. When, however, so advanced and frosted, then the hearts become strong or else decay. A variety that can be sown in June and will give small, compact heads like those of the Dwarf Green Curled or Early Ulm from November onwards is far more useful than varieties that heart in during September and October.—A. D.

Rose Garden.

TEA-SCENTED ROSES.

Profiting by the experience of last winter when so many plants were killed outright and others seriously injured by the frost, cultivators should be on their guard this year and see that material is close at hand to protect the plants as soon as there are signs of a severe frost. I do not think it desirable to use protecting material of any kind until it is really wanted, as the longer the growth is exposed the better condition will it be in to resist the cold when it does come. I find that in the west of England the only protection Tea Roses want is a cone of coal ashes heaped up the stem 6 inches to 9 inches high. Another good plan is to take some soil from between the plants and form a cone with it up the stem in the same way as is advised for the ashes. In ground that is likely to retain a deal of moisture in the winter, the removal of the earth from between the plants is of considerable importance, as it assists in draining away from the plants any excess of moisture. If I had done this fifteen years ago when I had a heavy and badly drained soil to deal with, I should have had a better opinion of the capacity of this class of Roses to endure frost. Most cultivators will be content if they can save a few inches of the main stem above ground, and by following the above advice they can do so in the majority of cases. According to my experience, the plants that suffer most from a severe winter are those from which the flowers are cut through the summer and autumn. In private places this would not, of course, occur to any serious extent, but growers who want all the blooms they can get and as late in the autumn as possible are not so favourably placed. It is these that should use efficient protection. It is quite reasonable to suppose that when the plants are cut about in this way they are considerably weakened, and therefore not in such good condition to go through a hard winter.

The condition of both the H.P.'s and Teas at the end of the summer just past was quite

conclusive that there are greater recuperative powers in the latter than in the former. I am alluding to plants that suffered the most from the cold of the last winter. The Teas in every case recovered more quickly than the strongest of the Hybrid Perpetuals. This has been so manifest all the season, that I regard the experience of much practical benefit for future operations.

I think we have still something to learn about the most suitable stock for weak-growing Tea Roses. The Manetti is too vigorous for such weak growers as Ma Capucine, Mme. Charles and Narcisse. Do what one will, the suckers are sure to appear, and then all hopes of obtaining a strong plant are lost. The trade, I think, should use a little more judgment in this matter and work the weak growers only on the seedling Brier. The greatest failure I ever saw through the influence of the stock on the plants was some twelve years or more ago at Canonteign House, Devon. At this place several hundred plants had been set out in specially prepared beds. At the end of the third year when I saw them, quite 60 per cent. of the plants were dead, all of which had been worked on the La Grifferaie stock. It is a consolation to know that this stock is not much used now.

Referring to the plate given in THE GARDEN for October 9 of the Tea Rose Narcisse, I do not think the drawing does the flower justice in point of colour. Perhaps one could hardly expect colour-printing to bring out the soft and delicate shading of this delightful Rose. You have not said a word too much in its praise as a garden Rose. J. C. CLARKE.

ORCHARD AND FRUIT GARDEN.

PEAR DOYENNE DU COMICE.

THIS Pear is said to have been raised in the garden of Comice Horticole at Angers, and first fruited in 1849. In England it is by some considered the best Pear in cultivation, and should be included in every collection. Readers of THE GARDEN have frequently had its merits brought to their notice. It evidently delights in a fairly warm situation, and the tree that I have rarely fails to produce a good crop. It is growing against a wall and in a sheltered corner facing south. It scarcely ever yields any small fruit, or say weighing less than 10 ozs., while if the fruit is early and freely thinned out, the average weight is nearer 14 ozs. I have had individual fruits weighing 20 ozs. I have seen fine crops of large and more highly coloured fruit on more stunted trees also growing against a nearly south wall, and also good crops on cordons. In every case the fruit has been first-rate, the only rival to it being Marie Louise at its best. In many gardens pyramid and espalier-trained trees are to be found, and if these do not produce fruit equal in size and appearance to that on trees grown on walls no fault can be found with the quality. The tree is naturally of a stout and fruitful habit of growth, and I find the Quince stock does not greatly influence this. All things considered, the Quince is perhaps the best stock that can be chosen. The soil in which the tree is growing is a fairly strong clayey loam, or such as suits fruit trees for a long time at any rate. Some fruits that I exhibited in 1892 at a west of England Chrysanthemum show were considered by many people to be of foreign growth. I.

Synonyms in Apples.—Very useful to intending purchasers must have been the lists given in THE GARDEN lately of Apples sold under various names. There are, however, still many synonyms which I do not remember to have been mentioned. For instance, Pine-apple Russet is commonly known as Golden Reinette, the New Hawthornden as Graham's Giant, that popular Apple Pott's Seedling as Holland Pippin, Earl Moira as Spencer's Favourite, Sleeping Beauty, and Queen Caroline, Stirling Castle as King Noble, Fearn's Pippin as Clifton Nonsuch, Red Astrachan as Duke of Devon, Cox's Pomona as Red Ingestre, Court Pendu Plat as Woollaton Pippin, Blenheim Orange as Beauty of Hants and Prince of Wales, and the good old Rymer as Caldwell. Intending planters ought to be informed of these synonyms, as much disappointment is likely to follow.—J. C.

Pears and birds.—Where tits are numerous the majority of gardeners are always troubled in the same way as the two correspondents who



Pear Doyenné du Comice.

stated their experience in last week's GARDEN. Have they tried stout half-inch mesh netting? I have used it now for several years and find it answers the purpose admirably. No birds can get though this, nor, if it is propped by sticks far enough away from the wall, can they pick the fruit through the net. It is considerably more expensive at the outset, but, I think, cheapest in the end, as it also answers the purpose (double) for spring protection, and in all ordinary seasons will be found quite sufficient. For the benefit of those who have not already tried the experiment, I may note that "tapped" fruit can be preserved and ripened satisfactorily by the aid of plaster of Paris. Make the hole caused by the birds as dry as possible, and run in the plaster, smoothing down so that no air penetrates between the skin and the wound, and in nearly every case decay will be arrested and the fruit ripen off well. I remember saving a batch of Melons once in this way. They were just approaching the ripening stage when a rat found its way into the pit and nibbled a lot of them. Premature decay would certainly have set in if I had not resorted to the plaster of Paris. *Re* the question of the birds, what a fastidious taste they possess. I have a Cornish Gilliflower Apple growing between an Adam's Pearmain and a King Pippin, and one would have thought the two latter, being much more attractive in appearance, would be tapped. No such thing; the birds ignore their existence and make straight for the Gilliflower, every fruit of which would be spoiled if I did not net the tree. There was, by the way, a remarkable absence of blackbirds and thrushes last summer. They must have succumbed in great numbers during the severe weather experienced early in the year.—E. B., *Claremont.*

Apple Duck's-bill.—I do not remember to have seen any reference to this cooking Apple in THE GARDEN. Probably it is but little known. When the tree under my charge first fruited, I, being ignorant of its name, sent a few fruits to the editor, who replied that it was Duck's-bill of Sussex. Since then I have seen it in the lists of several trade growers, and believe it is highly thought of in Sussex, the county from whence it takes its name. However, one thing is certain, viz., that for a long-keeping cooking Apple of splendid quality it will take a lot of beating. The fruit is of medium size, rather rough in the skin, and intensely red next the sun. If not quite such a heavy cropper as some standard sorts, its long-keeping qualities and general excellence when cooked entitle it to a place in every orchard. In March and April Duck's-bill is not to be despised in the dessert.—J. C.

GRAFTING VINES.

CAN I with hopes of success graft Black Hamburgh on Foster's Seedling, Mrs. Pearson, and Madresfield Court? Also, can I graft Gros Colman and Black Alicante on Lady Downe's, Muscat of Alexandria and Syrian?—X. Y. Z.

*** Black Hamburgh Vines are frequently used as stocks for other varieties, and answer remarkably well too, but it is not often that this old favourite is grafted on or inarched on Foster's Seedling, Mrs. Pearson, or Madresfield Court. Doubtless "X. Y. Z." has good and sufficient reasons for wishing to change the character of the Vines of the three last named, but would have done well to state them. We graft or inarch comparatively weakly growers on to more robust varieties, thereby rendering them more easy of culture, while the more rank-growing, non-fruitful varieties can be made most productive by being established on stocks that have a restraining influence on their growth. Both the Black Hamburgh and Muscat of Alexandria are excellent stocks for either weakly-constitutioned varieties or shy-bearers. Madresfield Court also proves a good stock for strong growers, and I have known Foster's Seedling similarly utilised with good results. Mrs. Pearson is late in ripening and not a strong grower, but might yet be converted into a stock for Black Hamburgh. Gros Colman and Alicante would succeed well on Lady Downe's and Muscat of Alexandria, but I should say Syrian would not be a good stock for either of them, as it is a very strong grower. It is the usual practice to place one black variety upon another of the same colour, treating white Grapes similarly, but there is no real necessity for this arrangement. For instance, some of the best Gros Maroc I have ever tasted, or nearly the only berries of the variety that I could truthfully say were fairly good in quality, were cut from a rod inarched on to a Vine of Foster's Seedling. In this instance there was no appreciable difference in the size of bunch or berries on inarched rods and those on own-root Vines of Gros Maroc, but many years ago I remember taking note of the behaviour of rods of Black Prince inarched on to old Vines of common Sweetwater that had been largely planted in the vineries by mistake. Grand rods were formed and handsome bunches were expected. Instead

of this, neither the bunches nor the berries were any larger than those of the stock, all being decidedly small. That was what might be termed an unhappy marriage, and serves to act as a warning against grafting any but the most robust growers on to a weakly stock. Late, or comparatively late, varieties may be grafted on to early varieties, but if a rod or two of the latter is saved it will most probably be found that these will start a few days in advance of the late variety, and have all the best of them throughout in consequence. That was my experience with the Black Hamburgh as a stock for Muscat of Alexandria, and if "X. Y. Z." experiments so extensively as he seems inclined to do, he, too, may have some curious experiences to relate in future years. Bottle-grafting is the easiest and surest way of establishing one variety upon another, and this should be done after the stock has commenced active growth, the scions being dormant. If the latter are kept plunged in the open ground during the winter, this will retard them sufficiently.—W. I.

THRIPS ON VINES.

How can I get rid of thrips, which has overrun an early vinery of Hamburghs and also Gros Colman and Black Alicante in a late vinery? The Lady Downe's in the same house and on the north side (the house is span-roofed) the thrips has not touched. Would it be of any use to take away during the winter the surface soil in the vineries and replace it with fresh soil? With what should I paint the Vines? I have used soft soap, sulphur, tobacco-juice, lamp-black, and cow-manure.—X. Y. Z.

*** Of the two species of thrips the worst to contend with is the yellow one. In some gardens the Vines are very liable to be attacked by the latter, which, owing, I think, to the proximity of forest trees, has proved most injurious in spite of rather drastic remedial proceedings taken against it. In order to be effective, fumigation with tobacco paper must be strong, and if slightly over-heated or if the leaves happen to be damp, wholesale burning may take place. "X. Y. Z." will do well to once more try preventive measures. During the winter give the roofs and back walls of the houses a thorough cleansing, and then take the pruned rods in hand. Clear them of all loose bark, more especially about the joints or spurs, and then scrub them twice over with hot soapy water, every crevice or lurking place of the insect in any stage of growth being searched out. This will prove far more effective than thick vile mixtures such as "X. Y. Z." mentions. Too much value is often attached to this daubing of Vine rods. When the mixture used is too thick to be easily applied with a brush it is next to impossible to use it effectively, and in careless hands what is supposed to be a remedy very often proves quite the opposite, favouring the comfortable wintering of insect pests rather than otherwise. In addition to well scrubbing the rods "X. Y. Z." may dress them with a thinner concoction than formerly, substituting enough clayey water to slightly thicken it for the lamp-black and cow manure. After the rods are finally slung up, remove all rubbish and the surface soil in the vinery, quite baring the topmost roots, replacing with a rich compost, that is if it is an inside border and the Vines are in need of assistance. A dry atmosphere is very favourable to the spread of thrips, and in addition to keeping up the requisite amount of moisture in the air, keep a close look-out for any that may appear on the leaves, sponging with soapy water directly it is seen.—W. I.

Showy Pears and Apples.—Most of us have a weakness for showy fruits, and Pears are no exception. Unfortunately, the showy varieties take the eye and we must grow them. Beurré Clairgeau, one of the handsomest October Pears, if sent to market will command a good price, whereas the smaller and superior Louise Bonne of Jersey or Marie Louise will realise far lower prices. It is interesting at our autumn shows to see how judges' tastes differ. Some say we must recognise size and dishes of Pitmaston, Beurré Clairgeau, and even Grosse Calebasse and General Todtleben will be placed before Doyenné du Comice, Thompson's and Marie Louise. It requires strong-minded judges to pass over these large fruits and give the awards to flavour and good quality. I am pleased to note that the really good fruits are in a few instances given the premier awards. I think we have of late years paid far too much attention to mere size in fruit, and to a certain extent exhibitors now run in one groove, flavour, keeping qualities and any other good points being unnoticed in Apples and Pears. I also note many of the newer kinds of these fruits if large are much sought after by exhibitors. Many new Apples have been raised during the last quarter of a century, but how few of these are equal in quality to the older kinds. I admit size in most cases is the only gain, this being at the loss of quality. I recently noticed in these pages a plea for classes of fruits at large exhibitions of those kinds noted for quality, size being of secondary importance. I gladly note this plea for quality, and would go further, and add we may also consider keeping qualities and the crop also, as many of the large showy fruits are indifferent croppers and poor keepers. Some of the newer Apples and Pears cannot be termed second-rate. Large Apples and Pears are very misleading.—W. S. M.

Damsons.—I was much interested in the article by "W. G. C." (p. 357) on Damsons, and I should like to impress on anyone who is going in for their culture to bear in mind the fact that, although they certainly do grow and bear fruit in almost any kind of soil or situation, there is a vast deal of difference in the crops borne by trees planted on good soil and those on stony, thin soils. The prevalent idea that a hedgerow or any out-of-the-way corner is good enough for Damsons is, to say the least, most unfortunate. I had this fact very forcibly impressed on me during the past summer. I planted a good many trees, mostly of the Crittenden or Cluster Damson, during the past twelve years, and they are now fine trees, for having pruned them after the Kentish style, stopping all the strong shoots, they have dense heads of short fruitful spurs, and the tiny shoots are as thickly set with fruit as bunches of Grapes. During the severe drought in June and early part of July the trees suffered considerably where planted on light stony ground, the foliage dropping off by reason of red spider attacks, while a good deal of the fruit dropped as well. On deeper and richer soil the trees finished a splendid crop. Of course, very much could be done by mulching, watering, spraying the trees, &c., to check red spider, but there is nothing like planting on good soil and treating liberally afterwards. Large fruits sold freely, while the small ones were a drug on the market.—J. Groom, *Gosport.*

NOTES ON THE HEREFORD FRUIT SHOW.

At the above show, held November 5 and 6, there were several very interesting features not usually present at many of our exhibitions. One of the most striking was a collection of cider Apples and cider sent by the French Pomological Society. Each dish consisted of ten Apples, selected from six districts in France, viz., Normandy, Picardy, Morbihan, Côtes du Nord, Loire Inférieure, and Ile et Vilaine, sixty plates or ten dishes from each. For comparison, Mr. J. Watkins, Pomona Nurseries, Hereford, staged thirty-eight dishes and nine baskets of Herefordshire cider fruit, which far surpassed the French exhibits in size of fruit, colour, and cleanliness. To make his display more interesting and instructive, Mr. Watkins had labelled each variety in a manner similar to the French fruit, stating its qualities as a cropper, habit of growth, its bloom, fruit, juice density, flavour, sugar, and tannin. It appeared from the lecture delivered by Mr. Radcliffe Cooke, M.P., on cider-making in France and the system of exhibiting, that all exhibitors are obliged to give full instructions as to the variety, form of growth, situation, aspect, soil, &c. In this way their shows are infinitely more practical and of greater national service than our own, and I feel convinced that if we adopted similar plans at our hardy fruit exhibitions there would be fewer useless sorts grown and a better class of fruit generally cultivated in this country. It is to be hoped that an important society like that of Herefordshire will see their way to adopt this improved system in the future. Several thousand dishes are annually staged at their November show, and if all these varieties were labelled as described above, there is no question that the society would give a grand object lesson and confer a lasting benefit on the county by indicating to intending planters what to plant and what to avoid. Take, for instance, Belle Dubois or Gloria Mundi Apple, which was staged in fine condition; very few would plant it if the variety was described as a strong grower, prone to canker, shy bearer, seldom producing a good crop, fruit often of ugly shape, and very uneven in size. There are many other Apples and Pears that are staged in splendid form at our great shows that would seldom be planted if their true character was thus defined, and it must be patent to all practical men that some such measures are necessary to make our fruit exhibitions what they ought to be.

Pears in the collections were not so well represented as on former occasions at Hereford, but the single dish classes were first-rate. The Doyenné du Comice Pears which secured the premier award for Mr. J. W. Bulmer were magnificent, and the same applies to the Marie Louise staged by Dr. T. A. Chapman, who was an easy first. In the any variety class of Pears for flavour, Lady Emily Foley, Stoke Edith, secured first place with a delicious dish of Thompson's. In this class there was a great difference in the same varieties, only two good dishes of Thompson's appearing; the flavour of the others was poor. Marie Louise could be described as fair, Doyenné du Comice surpassing it, but not equal to the first prize Thompson's. Cox's Orange Pippin obtained first place as the best-flavoured Apple, and the dish of the same variety in the first prize collection of thirty dishes of Apples from Glewston Court gained the award for the best dish of dessert Apples in the show. A prize was offered by Mr. J. Wilson, Hereford, for a more tasteful arrangement of cut blooms of Chrysanthemums. The stand taking first prize was a decided improvement on anything else seen at Hereford. The blooms were well up above the stands, which were faced with nice green Moss, on this sprays of Maiden-hair Fern had been fixed, on which the blooms seemed to sit. At the close of the second day the Fern appeared as fresh as if only just picked, and, judging from the unstinted praise and admiration bestowed on this exhibit by ladies and others, this style of showing cut blooms is worthy of imitation. Several competitors in this class had placed coloured foliage on the stands as a groundwork, but the effect was by no means pleasing or in good taste, as the colour of the blooms and the foliage did not harmonise at all well.

W. R. H.

NOTES FROM ALMONDSBURY.

Ipomæa r. cœrulea has been blooming freely here. Some forms are pure white, but the common type is a wonderfully fine blue. Why does this Ipomæa develop rather blunt thorns on its leaves and stems? I have never noticed them before. I once saw a deep-coloured Castor-oil Plant about 8 feet high outside an iron house in Kimberley covered with this Ipomæa; the effect was very fine. Lately I had some roots of Ipomæa pandurata dug up. After digging down 3 feet my gardener broke off the root, a solid mass about 6 pounds weight like an enormous Potato. I wonder how much was left in the ground. This species blooms well here. I bloomed single Cactus Dahlias this year in five

months from seed, and have now quantities of Cyclamen in bloom from seed sown in February. The Marguerite Carnation is an instance of the same kind. My own plants have had no very great care bestowed on them. There are some plants I should like to hurry up a bit. Eremurus robustus, a five-year-old when procured, I have cared for for three years, but I think it doubtful if I shall bloom it in 1896, and when it has flowered it will probably disappear. Iris Kæmpferi, auction bought dried clumps, bloomed well with me this year. I have never done anything with them before. The secret is rich soil and putting them near a pump, whence give them a daily soaking. For a quaint, tall and graceful winter blooming plant let me recommend Antholyza bicolor in a pot. I know nothing quite like it. I accidentally dried mine off in the summer; now they bloom at the time they would naturally in their own country. Would not more plants from Africa's sunny climes prefer to bloom at the time natural to them if they were encouraged to do so? The new Physalis Franchetti is very much admired here; the colour is wonderful. I am sowing seed to-day. Erythrina crista-galli as well as E. Kaffreana are among my failures; the latter has severe thorns on both sides of its leaves. I hear it blooms freely in Grahamstown gardens, whence indeed my seed came. There it has a good deal of rain in winter and a very hot sun in summer. The Water Lily garden pictures are very charming. My brother, Frank Miles, took a great deal of trouble with these. It is delightful that another has succeeded so well with them. C. O. Miles.

MUSA ENSETE IN CORNWALL.

The Abyssinian Bananas here shown are Musa Ensete. The one at the extreme right is 10 feet high. The seed was sown in February, 1894, and the seedling was planted out in the open in June of the same year. The plant was taken up and put into a box at the end of October, and put out again last June. The one on the right of the figure was raised from seed in June, 1894, and planted out this last June. The large one on the left was 12 feet high last October, when I put a wooden shed over it. All the old leaves died in March and those shown are this year's growth. A small one at the extreme left survived two winters with only mat protection, but the roots were mostly killed and it had to make new ones; hence the diminished size. The shrub immediately behind the figure is Desfontainea spinosa in full flower. The Acacia in the background is A. lophantha, behind this Cordyline indivisa. The shrub to the left of the big Banana is Carpenteria californica, which flowers annually. The bed in which the big Banana is has an edging of Iresine from 1 foot to 2 feet high. Howard Fox.

Rosehill, Falmouth.



Musa Ensete in the garden of Mr. Howard Fox at Rosehill, Falmouth.

Clethra alnifolia.—There is something very attractive in a well-developed specimen of this flowering shrub. It is unfortunately somewhat tender and requires a sheltered situation, cold east and north winds being apt to disfigure the foliage and lower its blooming capacity. It also requires a well-drained soil, thriving better in light soils than in those of a heavy character. Where soil and situation are favourable this Clethra should find a place.—J. C. B.

CHRYSANTHEMUMS.

SPOILING THE CHRYSANTHEMUM.

Some years ago I wrote a note on this subject in The Garden animadverting on two points in connection with our great autumn flower—the tasteless and hideous way in which it was shown and the way in which florists were destroying the whole natural grace and beauty of the Chrysanthemum. Since that time an immense reform has taken place in the way in which all flowers are shown at our horticultural exhibitions, and taste and individual fancy are fast removing the old soul-deadening monotony which was dictated by the want of taste of the old florists, whose ideas of beauty were founded on the compass and the cut Turnip. In the Chrysanthemum, amateurs have had sufficient courage also to rebel against their gardeners and to discard that hideous Cauliflower-like abortion, the incurved variety, and to put an end to trained specimens. Little progress has been made, however, in giving us fairly good

single varieties, which to my mind form the most expressive development of the Chrysanthemum. For instance, so far as I know, there are no singles offered which are early enough for the open air, though they are far more capable of surviving damp and early frosts than heavy double flowers crowded with petals, and which can only really come to perfection in quite dry and fairly warm weather. So far as indoor Chrysanthemums go, it is true that the incurved varieties are being driven out, but a heavy price is being paid for this victory. The elegant wildness and orderly confusion of the Japanese sorts are being trimmed away into as close an imitation of the lamented incurved kinds as our florists dare to venture upon. We are presented with flat monstrosities with thick, tangled centres and a fringe of irregular petals. The Cauliflower or cricket ball ideal of the florist is now succeeded by as close an imitation as possible of the domestic mop, stick and all. It is true that the stick is being shortened, simply because ordinary humanity is not tall enough to live up to the floral level of the show Chrysanthemum. We already have flowers of this sort as big as the top of a hat, or even as a small soup plate. Within a few years, if we progress in this fashion, the mop ideal will be reached, and we shall have exact copies of that familiar implement in size as well as in general appearance. Surely this is not progress, but retrogression. As time goes on, people of taste in floral matters are more and more considering the Lilies of the field, and finding how true it is that all the glories of Solomon cannot vie with them. They are realising that every flower has a natural character and expression, and that to pervert these is to bring about the survival of the unfittest, not only from a scientific, but from an artistic point of view. Hence the revival of the taste for natural hardy flowers, and the preference for the humble flowers of the Alps and of our own and other fields, hedges, and woods, instead of for the pedantic and ignorant fancies and taste of the "florist" of thirty years ago. To all this general progress the Chrysanthemum is an exception. It is retrograding and spoiling under the perverted taste of our great growers and fanciers. For all decorative purposes the outdoor sorts, poor as they are, are infinitely preferable to the newest prize varieties, notwithstanding all their gold, silver, or bronze medals. We have improved the way of showing Chrysanthemums, but that is useless if the flower itself is to become an ugly monstrosity. J. I. R.

FADED CHRYSANTHEMUMS.

When blooms that have long drooping florets are staged from a week to ten days after they were at their best, then every day, especially if the weather be damp, tells upon them adversely, the lower petals turning brown and wearing a dirty, bedraggled appearance. The presenting of such blooms at a show is a grave mistake. If judges, less dazzled by mere size and bulk, would resolve to ignore these large stale blooms and to favourably regard only those even if somewhat smaller, yet quite fresh, we should soon cause the entire disappearance of these stale blooms, not a few of which have already done duty at shows several days previously. To require size, depth and solidity in Japanese flowers early in November is all very well, but later these requirements should be made secondary to freshness and brightness, with an entire absence of stale or dirty petals. Such blooms as these would be as creditable to the grower in the middle of November as would blooms equally fresh and one-third larger and fuller when the month opens. Looking over the recent show at Kingston on the second day, I could but notice in brighter light how favourably the incurved Japanese flowers compared with those of the loose-petalled section. These have no bedraggled aspect, and, because of their solidity and substance of petal, seem to keep fresh so much longer. It seems as if for late showing it would be wise to grow these solid incurved varieties more largely. Their demerit is that they are stiff and formal in appearance compared with the more tasselled flowers. If, however, they are less susceptible to damping and keep fresher so much longer, then their merits in these respects to a large extent counterbalance their demerits. Blooms of this description being, as a rule, not so large as are the flowers of the tasselled section, do not harmonise with them in stands, but they would very well with second-sized very fresh flowers, especially of such varieties as Colonel Chase, Commandant Blusset, William Seward, Golden Gate, a lovely variety, and others of that solid reflexed type. Apart even from the difference in freshness tasselled and incurved Japanese flowers present later, the two forms need division, and a regular section of incurved Japanese should be formed. Very fine and fresh at Kingston of the latter were Robert Owen, Lord Brooke, Louise, Viscountess Hambledon, Mme. Rozain, Mme. Alf. Chatin, Mr. Denne, R. C. Kingston, deep red, Silver King, Beauty of Castlewood, Mrs. Harman-Payne when of incurved form, and the quaint Good Gracious, which belongs almost to the type. The American Philadelphia incurved Japanese was at Kingston very poor. Probably we shall see little of it in future years. However, the list given can be largely added to, and those who grow the section for late purposes will find there is great gain. That superb variety Robert Owen is a good keeper, for a good bloom of it last year was shown two weeks in succession. However, I do not advocate the holding over of flowers in that way, far from it, but the fact stated serves to show how well the incurved varieties keep. One advantage resulting from the holding of shows over so long a period as four weeks is that whilst some encourage the production of early flowers, others favour late ones, and thus the blooming season is prolonged. A. D.

CHRYSANTHEMUMS AS ANNUALS.

When we look back upon the last decade of Chrysanthemum-growing it is quite easy to discern the great strides that have been made, more particularly with respect to English-raised seedlings. Indeed, the advances seem so great and the seedlings obtained so meritorious, that our friends across the seas (French as well as American) will soon find formidable rivals among the specialists in England. Less than ten years ago Mr. Robert Owen, of Maidenhead, was undecided as to the best way of securing seed from home-grown plants. To-day his name is almost a household word as a raiser of some of the finest English seedlings. The whole thing is so interesting, especially so to amateurs whose living is not dependent on the results of their labour, that anyone having a small house at disposal may grow and prove a few seedlings each year. The seedlings are so varied and very often so different from what may have been expected, that novelties are sure to result. For two or three years past I have raised a few seedlings from my own seed, and the results are so encouraging, that I am tempted to detail my experience for the benefit of those having more spare time at their disposal. I have not the slightest idea upon what lines our English specialists save seed, or what they consider the surest way to secure a plentiful supply of pollen. My own notion of the matter is that two-year-old plants may invariably be relied upon for securing pollen in plenty, and not only this, but flowers also of a kind that are more certain to ripen seed. The plants intended for seed-bearing must be set apart from those which are grown for flower-producing, and should on no account be highly fed. Indeed, two years ago I harvested a nice bit of seed in December from cuttings inserted in the June previous, but this is an exception to the general experience. By confining the plants to medium-sized pots and a poor soil, flowers thin and poor in character will result, and these are much the best even in the first year. Then the same plants may be grown another year also, and the thin, wiry wood that follows will be found first-rate for the purpose. What I have done so far has been with white and yellow kinds, and with a view to get a more generally dwarf habit. We have now some good material to work upon of dwarf habit and bearing fine flowers, so that it should be easy to keep the stature of all future kinds within reasonable limits. Where the pollen is not required, I pull out all the disc florets and anthers; this I find causes the outer florets to come more to the centre.

The florets are cut away with a pair of scissors. Where this is done while the flower is comparatively young, what is left of the florets often expands, and thus the essential organs are distinctly visible. By the aid of a lens these latter may be watched from day to day, and when ready to receive the pollen may be duly fertilised and noted accordingly. There may be other ways equally successful for securing flowers and pollen, but the above is my own experience and which so far has proved successful in seed-producing.

By growing the seedlings in pots the plants may be flowered the same year; in fact, I have some plants now going out of bloom from seed sown on January 10, 1895. The first seedling appeared eight days after the seed was sown, and the plant flowered early in October, at about 3 feet high, the growth very compact, the flowers chestnut-bronze. This resulted from crossing two yellow kinds, Mrs. Hawkins as seed parent and Admiral Symonds as pollen parent. Two of my unflowered seedlings of 1894 have produced pure white flowers, in one of the exceeding purity of Elaine. These being too late to flower last year, have been simply grown on for proving, carrying four or five stems each; notwithstanding, the flowers are very double. These will be duly tried another year. With the two-year-old plant system, however, many seeds can be ripened for sowing early in January, and the seedlings be flowered the same year, treating them as annuals in fact. Where the hybridising of very late kinds is carried on the seed will hardly be ripe in time, unless the lateral buds from plants that have produced large blooms are used. These laterals often flower from February to April, and where pollen can be secured at the same time the seed will have a good chance of maturing during the summer. To get these flowers, the plants blooming in the previous autumn should be saved with all the stem intact. E. J.

Black-fly on Chrysanthemums.—How can I get rid of black-fly on Chrysanthemums which have been troublesome during the whole summer? The plants were in every respect, so far as culture is concerned, properly treated.—X. Y. Z.

*** Many growers have been troubled with the small black aphis on their plants, but if they would persevere with the syringe, using nothing but clear cold water, they would find this a simple and most effective remedy. Should this not prove quite equal to getting rid of the tiny pests, then tobacco powder ought to be well puffed into the points of the shoots overnight and be syringed off next morning. If by chance a few aphides are housed with the plants, follow them up with the powder and syringe, not delaying this till the in-

sects are established in the blooms, as then there is no getting rid of them without removing the blooms as well.—I.

Exhibiting Chrysanthemums.—For a long time past much has been written advocating an improvement on the bare, broad style of exhibiting blooms. I am pleased to observe that the N.C.S. and other societies are encouraging displays of blooms in vases, but as yet the competitions have principally been confined to the Japanese section. Of all the classes which are improved by this manner of exhibiting, none can compare with the singles. At the late exhibition of the N.C.S. I was grieved to see boards were still used. Surely no objection can be raised against vases for exhibiting singles. Why do not the various societies have classes for singles exhibited in sprays, say six sprays of each variety? Again, a standard excellence should be set up. The inference to be drawn from the awards made at the N.C. Society's show is that size is everything. Many hold the opinion that form, brightness, or clearness of colour, combined with medium-sized blooms, should be preferred to the large, coarse flowers which are sometimes honoured by the chief prizes. In single Dahlias, size is a secondary consideration.—S. C.

CHRYSANTHEMUMS AT MAIDENHEAD.

THE Floral Nursery, Castlehill, Maidenhead, where Mr. R. Owen has been established so long, is situated in a spot that must be peculiarly favourable for the culture of the Chrysanthemum when we consider the close proximity to the great metropolis of some growers who achieve great results with this popular autumn flower. For some years past Mr. Owen has materially contributed to enlarge the list of sterling novelties both from his own seed and by selections from the seedlings of American and Continental growers. This year again his collection is a comprehensive one, and comprises new varieties under trial from Africa, France, Italy, America and other places. A large number are therefore unnamed and cannot be individually referred to, but we were struck on the occasion of a recent visit with a French friend at the wealth of colour, especially in bronze and crimson shades, that these new seedlings display.

The *élite* of the collection finds a home in the large greenhouse, and some finely-developed blooms were on view there a week or ten days ago. Most of the flowers belonged of course to the Japanese section, although new Anemone-flowered and incurved varieties claimed a place. As many of the varieties of the older known sorts have already been fully dealt with in THE GARDEN earlier in the season, there will be no need in this article to do more than briefly refer to such as were in good form at Maidenhead when we called. Of these, Col. Chase, Pallanza, Junon, Beauty of Teignmouth, and Mme. Paul Lacroix were perhaps the chief.

In new incurved, the yellow Globe d'Or and Charles H. Curtis take the lead. Robert Petfield, of the same section, and its golden bronze sport George Haigh, which will no doubt be well received when put into commerce, are both good forms. Mrs. R. C. Kingston, introduced last season from America, is a delicate silvery pink, and in the same class Owen's Crimson, the name being sufficiently descriptive; John Fulford, golden chestnut; Rose Owen, pale rose, very round in outline; and a golden buff incurved, Ada Fulford, should interest all lovers of this somewhat ancient, but still highly esteemed type.

More varied in size, form and colour is that protean favourite, the Japanese. There are several raised in the Australian colonies—Lady Gormanstown, white, Pride of Launceston, and James Lynch, to wit. The Italian novelties are small in size, but very distinct in colour; they are not, however, judging by past experience, likely to obtain a very high position with English cultivators, and their style of nomenclature sadly needs some revision. Pride of Maidenhead is a large Japanese raised by Mr. Owen; it has long florets and is pure white with a pale primrose centre. Gen. Roberts, with medium sized florets, colour reddish crimson and golden reverse, is striking and effective. J. Bidencope, large and massive, having twisted florets, colour deep rosy amaranth, reverse silvery, also attracts attention, but the blooms of M. Aug. Lacvivier, deep golden yellow suffused salmon-rose, are the finest we have seen of that variety this season. Major Bonaffon, an intermediate form of Japanese incurved received from America, is very pure yellow. Mme. Rozain, a large incurved Japanese, colour silvery rose, was spoken of by us highly last year, and maintains the high opinion then formed of it. In Lady Ridgway there is a richness of colour, salmon-buff, tinted gold, not too often found even among Japanese. Pride of Launceston is a colonial novelty and worthy of a note, being velvety violet-amaranth. Graphic, white, suffused purple, is large and useful to exhibitors, and the same may be said of Mme. Paul Lacroix, pale yellow.

M. Calvat's seedlings are represented by Directeur Tisserand, yellow and crimson, a novelty only sent out this spring by H. Jacotot fils, deep velvety-crimson with reverse of golden bronze, and Reine d'Angleterre, a very large Japanese with flat florets rosy-purple in colour. From the same source comes M. J. Ginet, a bright-coloured novelty of this year's introduction.

A few hairy-petalled novelties are to be found in the Maidenhead collection, notably Vaucanson, figured in THE GARDEN on January 26 last; Esau, well deserving of its name, having very hairy long tubular florets, colour rosy-amaranth; Glasnevin, deep purple-amaranth, and Prima Donna, chestnut-bronze.

SHORT NOTES.—CHRYSANTHEMUMS.

Hairy varieties.—Going the round of the trade displays, only a few of these have been met with this season. Hairy Wonder (bronze), Enfant des deux Mondes (white), Mrs. Alpheus Hardy (white), Mrs. Dr. Ward (golden yellow and bronze), King of the Hirsutes (yellow) were among the most attractive.—CHRYSANTH.

Chrysanthemum Son Altesse Sidi-Taieb Bey.—Although a rather lengthy name, this variety is a pretty little October-flowering Japanese Chrysanthemum. When freely grown in the open border it will be very useful for cutting. The colour is pale lilac-pink. It is of French origin, and although not widely known, has been in cultivation for several seasons here.

Chrysanthemum Miss Louise D. Black.—This is one of the American novelties for the year and a striking flower. The colour is rich orange-gold that shows well under artificial light. This is a great point with yellows, as so many of them are wanting in colour at night. The flowers of this kind are solid and compact and of large size. The plant is of good habit, between 4 feet and 5 feet high.

OCTOBER IN SOUTH DEVON.

THE rainfall during the past month has amounted to 4·05 inches, to which must, however, be added the 0·27 of an inch which fell on the early morning of the 1st, and which, therefore, had already appeared in September's record. The rainfall of October, 1894, amounted to 7·76 inches, and the average for the last nineteen years to 4·34 inches. There have been twenty-one wet days in October, 1895, against seventeen in October, 1894. The heaviest fall in the twenty-four hours occurred on the 8th, when 0·88 of an inch was registered. During the ten months of 1895 20·74 inches of rain have fallen, against an average of 27·64 and 33·31 inches for the corresponding period of 1894. The mean temperature for the month has been 49·6°, that of October, 1894, having been 52·3°, and the average temperature 51·4°. The lowest reading recorded on the grass at the observatory was 25·7° on the 24th, but in a low-lying valley where there is water in quantity 10° were registered. From the 24th the thermometer on the grass fell below the freezing point on seven days. The sun has shone for 100 hrs. 50 min. during the month, thus beating the record of October, 1894—90 hrs. 45 min.—by over 10 hours, but being far below the average, which is 116 hours. The wind, though considerably more active than in September, in which singularly still month only 3175 miles of lateral movement were recorded, was far less boisterous than in the months of July and August—a rare case for the equinoctial month of October—the amount registered being 6443 miles, almost precisely similar to the record for October, 1894, while the lateral movement in the months of July and August exceeded 7000 miles in each case. The greatest daily velocity was 531 miles on the 3rd, the greatest in an hour occurring between 12 noon and 1 p.m. on the same date, when the rate observed was 41 miles. The direction of the wind has been southerly to westerly for twenty-one days, and north to east for the remaining ten.

Although October is not a month of varied display in the garden, many of the September flowers held out bravely until cut down by the frost of the 24th. The Begonias lengthened their already long season of bloom with as brilliant effects as in the preceding months. The last of the perennial Sunflowers, Pyrethrum uliginosum, Rudbeckia Newmanni and the later Starworts, of which Aster grandiflorus with its large golden-eyed purple flowers is one of the most effective, vied with the Dahlias in brightening the herbaceous borders. Small clumps of Dianthus Napoleon III. gave patches of deep crimson here and there, and the blooms of Stokesia cyanea, some plants of which perished during the last severe winter, added a tint of deep violet even darker in shade than that of Aster grandiflorus. Doronicum plantagineum Harpur Crewe produced its great golden stars in almost spring-like profusion, and each morning a few fugitive blossoms of Papaver pilosum were to be seen fluttering frail petals on the high bank. The flowers of the yellow Paris Daisies, though scarcer than in September, were charming as ever, and near the sheltered Lily bed the Acanthus threw up tall spires of bloom, while Erythrina crista-galli and the scarlet climbing Tropæolum continued to provide a but little diminished show of colour. Perhaps the most decorative plant of the month was to be found in the Winter Cherry (Physalis Alkekengi), which grows strongly here, making shoots quite 3 feet long studded with brilliant orange-red calyces. Arranged with autumn foliage and yellow Chrysanthemums, these sprays have a charming effect. Solanum jasminoides, a valuable climber in the south-west, has been everywhere smothered in white flower clusters. Even plants that were badly cut last winter are making a good show of bloom, and I have heard of no instance where it has been killed outright in this neighbourhood. Magnolia grandiflora has afforded a dozen or more flowers, but smaller than their predecessors, and the white Macartney Rose day by day, until the advent of the frost, opened its chaste single blossoms, which have been produced with intermission since the last week of July. Self-sown seedlings of the Mexican Daisy (Erigeron mucronatus) have flowered well, but the old plants succumbed to the long-continued frost of the commencement of the year. This pretty little plant seeds very freely in places, and the other day, on going over a friend's garden, I found a numerous colony flowering in the chinks of a wall, whither the seed had been blown from the parent clump, which was situated many yards distant. A striking feature in the garden during the early part of the month was the abundance of the little brown moth (Gamma digamma), which I never remember to have observed in such quantity, and which in the still evenings hovered over the tall heads of the Michaelmas Daisies in such countless throngs as to almost eclipse the blossoms, giving the impression of an ever-shifting kaleidoscope in which sometimes the lilac of the flowers, sometimes the umber of the moths' wings, predominated. Talking of Asters and insects, the dwarf A. dumosus seems the most appreciated by the bee tribe, on a sunny day scarcely a bloom being untenanted by either a yellow-banded humble bee or its brown sister of the hive.

The extreme heat of September has evidently had an unusual effect on vegetation, as during

the first three weeks of October Primroses could be gathered from the hedgerows. Laburnum was in bloom, as was Cytisus racemosus planted out in a sheltered position, while ripe Strawberries and Raspberries could be picked in the kitchen garden, where Apple trees were bearing at the same time fruits, some fully ripe, others of the size of Walnuts, as well as rosettes of fully-expanded blossoms at the ends of the shoots.

The frost, which has now left the garden desolate, arrived much earlier than is usual in this locality, Christmas being often reached before more than 2° or 3° are registered on the grass. A limit has now been practically set to the outdoor flowers of the year, and, with the exception of the Christmas Roses, of which the first flowers from H. altifolius were cut on the 6th of the month, Iris stylosa (the Winter Flag), Schizostylis coccinea, and stray blossoms from Safrano or other Tea Roses on sheltered walls, there will be little to mark till the coming of the first Snowdrop. S. W. F.

TREATMENT OF LAWNS.

I should be obliged by your informing me of the proper manure for lawn and cricket ground. They are already in pretty good condition, but I want to improve them. The soil is light.—J. G. C.

*** A really good and well-levelled lawn or grass plot, to use an old English name, is what is wanted near every country house as well as in more public places. Such a flat and even lawn may be used for such games as cricket, croquet, and tennis. In all cases evenness of texture and short-shorn grass are essential. A well-made and neatly-kept grass plot is a constant source of pleasure in many ways, and during hot summer weather it becomes, as someone once termed it, "a mental salad"—so grateful is its velvety texture and cool hue to eyes full of heat and bright colour. One may now and then see lovely breadths of smooth, clean, and well-kept lawns near country or even near town houses, but with one or two rare exceptions the finest lawns I have ever seen are in the grounds attached to the colleges at Oxford and Cambridge. Perhaps in no other town or city in the world can such rich and perfect carpets of grass be seen; and there is a story of a rich American visitor who, after tipping one of the college gardeners handsomely, ventured to ask him what was the secret of such perfection. The man looked at his visitor a moment and then answered, "Well, you see, Sir, this is how it be. There is no secret at all about these grass plots, but they've been rolled and mown for nearly a thousand years." There is of course somewhat more than a grain of truth in the story, for constant rolling after rain and constant mowing (especially with a scythe) exert a wonderful effect on turf, as is generally well known. But when grass is mown and carried away for years and no return made, even the best of lawns deteriorate; and so it naturally follows that some return in the shape of manurial top-dressings at least once every year must be given to the soil in which the grass is expected to flourish. If this top encouragement is not afforded the grass becomes thin and weak, and ill weeds, such as Daisies, Plantain, Dandelion, Hypochæris, or in damp and shaded places even Docks, Groundsel, and Nettles will usurp the vacant spaces. Constant mowing is efficient, because grass bears cutting far better than do the weeds, and the same is in a measure true of periodical rolling after showers, but the royal road to fresh, green and clean lawns is due in a great measure to the well-directed application of manure to the grass. In a word, good feeding and quickly repeated mowings and rolling are at the bottom of good keeping so far as lawns are concerned.

From February to April is the best time for the application of top-dressings, but they may be applied at all seasons if finely sifted materials be used on the approach of rain. When I was admiring the lawn in St. John's Gardens at Oxford some years ago the gardener there told me that a mixture of sulphate of ammonia, finely sifted earth, and burnt refuse or wood ashes was used there, and he showed me patches of Daisies that had been scorched away by the application of the sulphate during hot and dry weather. Having at that time become responsible for some acres of rough and weedy lawns, I made many experiments with manures, and after repeated trials I find the following mixture gives the best results on a light and dry limestone soil: Finely sifted or screened earth, 5 parts; sulphate of ammonia, 1 part; kainit or wood ashes, 1 part; bones reduced by acid, 2 parts; soot and fine coal ashes, 1 part. Supposing each part to equal 1 cwt., we get here 10 cwt. of a mixture that forms a good, active, and lasting manure for 5 acres of lawn. In some cases I used nitrate of soda instead of the sulphate, as it is cheaper, but found that it did not act on the soil so efficiently as did the best sulphate from the gasworks at about 12s. per cwt., the nitrate costing about 9s. per cwt. I have tried farmyard manure, cow manure, bone meal, basic slag, fish and soot manure, but none of them alone in any way equals the permanent effects of the mixture I have given. Another excellent and lasting mixture is made by mixing thoroughly in a dry place 2 cwt. of bone superphosphate and 1 cwt. of kainit along with 5 parts of sifted earth. This should be applied in spring, say about March, and in April or May it can be followed by sowing nitrate of soda at the rate of 1 cwt. to the acre. Bear in mind that two top-dressings of 1 cwt. to the acre at an interval of a month or six weeks apart are far more advantageous than one dressing of 2 cwt. to the acre. I have used both the manurial mixtures in above proportions to flower beds and shrub borders with the best results, and they have been especially serviceable used rather more freely in renovating the grass where it is apt to become thin and sparse immediately beneath or near spreading trees.

There are many fine lawns in England. Indeed, the one thing American and Continental visitors to our shores first notice is the perfect green sward around our country houses. There is a very perfect bit of lawn at Howth Castle, fresh, soft, dense, and velvety green without a weed in it, this perfection being due to the personal supervision of the Earl of Howth himself, who thinks good lawns and fine old trees the perfection of good gardening. As Howth Castle grounds are open during the early summer months, the visitors who go there to see the stately old Beech hedges and Grass alleys and the great masses of Rosemary, Lavender and Thyme, and the superb standard Gloire de Dijon Roses should not forget to ask permission to see the "velvet lawn" which lies in front of the house, where visitors, as a rule, are not permitted to wander alone. I am not aware that any chemical manures have been applied to the Howth lawns, but they are copiously top-dressed every winter and spring with sea sand and finely screened earth, and are mown every few days during showery weather. The results thus obtained are most satisfactory.

Wherever artificial or chemical manures are not readily obtainable, an excellent home-made mixture may be made up of old Mushroom house or hotbed manure, soot, wood ashes, or other burnt refuse, and even dust-like coal slack and coal ashes may be added with advantage to damp and mossy lawns. All should be well turned over and mixed together, and finally when dry run through a half-inch screen or sieve and applied at the rate of ten or twelve tons to the acre. Above everything do not starve the Grass, and if possible during summer it should be mown and rolled every five days.—F. W. Burbidge.

Books.

IN VERONICA'S GARDEN.*

Here we have another charming volume by the author of "The Garden that I Love," and here also we renew acquaintance with Veronica, Lamia, and the Poet, and are again dazzled and entertained with the polished wit of their discourse. Veronica's garden is a rich jungle of Grass in spring, out of which rise shapely Pine and Fir—the Scotch, the Silver, the Nordmann, the Lawson, all fresh-tipped with golden green, and dotted among them shines the bright growth of young Beeches. To the right a scarlet Thorn just opening its brilliant flowers; to the left a Quince, "the most brilliant of all flowering shrubs, every long green curving branch starred with large single delicate pink and white blossoms—a fountain of bloom"; a group of golden Elder and a group of Spanish Broom "marvel of whiteness." Sugar Maple and Liquidambar reserve their beauty for the autumn, but late Tulips peep through the tangled Grass. Through the curving branches of a patriarchal Oak are seen irregularly dotted groups of flowers, wild and cultivated, wild Hyacinths, blue, pink, and white, Poet's Narcissus, little colonies of Columbine, and the green spears of Daffodil leaves. In the formal beds the Tulips have disappeared, but the Forget-me-nots are there still in the zenith of their amethystine bloom, and in the mixed beds and borders Oriental Poppies, yellow Dahlias, dark red Valerian, and snow-white Columbine. The eye wanders over Lilac, Laburnum and Guelder Rose, golden Berberis and silvery Japanese Maples, Rhododendrons, Azaleas, and the first rich red shoots of Tea Roses sprouting daintily above purple Violas—a perfect vision of garden beauty. Of birds they have enough and to spare—nightingales, blackbirds, thrushes, whitethroats, garden warblers, tree creepers, chiffchaffs, wagtails, robins, tits and finches. The cuckoo is well described as a "cheerful cynic and self-indulgent worldling," seeming to make a mock of his musical gift. And so on through the different months of the year we saunter or lounge with these pleasant companions and note in a casual dreamy way the effects of the seasons on the garden beauty round about. If there is nothing to compare with an English spring and an English summer, and the beauty of an English autumn is unique, an English winter is best avoided by those who can, and therefore we naturally, but regretfully take leave of the author and his friends at the gate of "a rather mournful-looking manor house" as they speed softly away down the orchard drive on their way to Italy. Those who care for old houses and trees and beautiful gardens should read this book.

F.

The weather in West Herts.—As far as the present month has as yet gone, there have been only one unseasonably cold day and but five cold nights. The 16th was particularly mild, the maximum reading in the thermometer screen being 62°, which is higher than any temperature recorded here so late in November during the previous ten years. On the other hand, during the nights preceding the 18th and 19th the exposed thermometer registered over 9° of frost. At 1 foot deep the soil is now at about its average temperature for November. Since the beginning of the month over 3 inches of rain have fallen, which

* "In Veronica's Garden." By Alfred Austin. Illustrated. Macmillan and Co.

is in excess of the mean fall for the whole month. Except on the first three days of the present month, the wind has come almost exclusively from some point between south and west, and on the 16th it blew with the force of a moderate gale, direction S.W. On the morning of the 18th the atmosphere was so foggy, that at 9 a.m. a house became invisible at a distance of 20 yards. Although one day was altogether sunless, the duration of bright sunshine for the past week averaged three and a half hours a day.—E. M., *Berkhamsted.*

SOCIETIES AND EXHIBITIONS.

NATIONAL CHRYSANTHEMUM SOCIETY.

A MEETING of the floral committee of this society was held on Wednesday last at the Royal Aquarium, Westminster. There was a good display of novelties, and some attractive exhibits were staged by Mr. H. Briscoe-Ironside, Mr. Norman Davis, Mr. E. Beckett, Mr. W. Wells, Mr. R. Owen, Mr. H. J. Jones and M. Ernest Calvat. Mr. McHattie staged two blooms of Mrs. W. H. Lees, one taken from the crown bud and the other from a terminal, showing the variety in two distinctly different forms, and was awarded a vote of thanks. A small silver medal was awarded to Mr. Briscoe-Ironside for a collection of cut blooms, which formed an important part of the meeting.

The following first-class certificates were awarded :—

CHRYSANTHEMUM MME. A. CHATIN.—Japanese, large and globular in build and of the incurving type, florets of medium width ; colour pure wax-like white. Exhibited by Mr. E. Beckett.

CHRYSANTHEMUM MISS ELSIE TEICHMANN.—Japanese, of good size, broad florets, curly at the tips ; colour creamy white. Shown by Mr. E. Beckett.

CHRYSANTHEMUM ROBIN ADAIR.—A Japanese Anemone, with several rows of long, drooping ray florets ; colour lilac-blush, centre tinted yellow. From Mr. R. Owen.

CHRYSANTHEMUM BONNIE DUNDEE.—Incurved. A deep solid flower of excellent form ; colour golden-yellow, tinted bronze. Also from Mr. R. Owen.

CHRYSANTHEMUM SURPASSE AMIRAL.—A large Japanese with long narrow florets ; colour golden-yellow. A seedling raised and shown by M. Ernest Calvat.

CHRYSANTHEMUM MRS. HERMANN KLOSS.—A very striking and large-sized Japanese with long flat florets ; colour rich golden-yellow, suffused crimson. Shown by Mr. Norman Davis.

CHRYSANTHEMUM KATE WILLIAMS.—A long-petalled single-flowered variety ; colour deep golden yellow. Exhibited by Mr. H. J. Jones.

CHRYSANTHEMUM PARTHENIA.—Japanese ; long drooping florets, curly at the tips, and of medium width ; colour white, slightly tinted. Mr. H. J. Jones was the exhibitor of this.

Other varieties were the new white Japanese Mrs. C. E. Shea, Latest Fad, an American novelty rather ragged in form, James Lynch, a good crimson reflexed, Graphic, Mr. Charles Lawton, and Desdemona. Jules Chrétien is a large, solid-looking Japanese incurved, amaranth and silver. M. E. Roger is a novelty of M. Calvat's, a green Japanese incurved of a decided hue. Harold Wells, a big primrose sport from Sir Trevor Lawrence, and many others were submitted for adjudication.

A meeting of the general committee was held on Monday last at Anderton's Hotel, Mr. B. Wynne occupying the chair. The secretary announced that prize money to the amount of £245 14s. was awarded at the recent November show at the Aquarium, and the following awards of medals were made by the arbitration committee : Gold medal to Messrs. H. Cannell and Sons, silver-gilt medals to Messrs. B. S. Williams and Son, Cutbush & Son, Sutton & Sons, J. Veitch & Sons, and W. G. Tidy ; silver medals to Messrs. W. J. Godfrey, C. Lee & Son, Spooner, N. Davis, the Jadoo Fibre Co. and Mr. T. Berridge ; bronze medals to Messrs. D. W. Buchanan and H. Shoesmith. These awards were in each case unanimously confirmed. Some further discussion took place with regard to the lighting of the building on the evening of the show days. Mr. Harman-Payne presented the report of the catalogue committee relative to the proposed jubilee edition. It was suggested that a large committee of experts be invited to co-operate by sending in returns, as was done some years ago, and that these returns be examined and tabulated for the purpose of forming the basis of the new issue. Other additions, such as selected lists of early and hairy varieties will be made, and the catalogue is expected to be ready for the public early next autumn. Twenty-two new members and three Fellows were elected, making a total up to the present of 84 Fellows and 115 ordinary members for the year. A rough financial statement was submitted, and the jubilee fund of £1000 is now open for any persons who are interested in the society's great effort of next year to subscribe to.

Royal Horticultural Society.—The next fruit and floral meeting of the Royal Horticultural Society will be held on Tuesday, November 26, in the Drill Hall, James Street, Victoria Street, Westminster ; and at 3 p.m. a lecture will be given by Mr. James Mason on "Asparagus Culture." The committees will meet as usual at 12 o'clock.

NOTES OF THE WEEK.

Hibbertia dentata, a pretty late-flowering greenhouse climbing plant we noted in quantity in Messrs. Smith's nursery at Worcester, deserves to be more popular as a greenhouse or conservatory climber. It has large single yellow flowers, which in size and shape resemble those of a wild Rose, and the rich setting of bronzy green leaves contributes to the charming effect of the plant when in bloom.

Acanthopanax crinitum is a distinct and pretty Palm we noted in the St. Albans nursery. It has graceful, divided, arching leaves like those of a Kentia, but more slender, the under surface of the leaflets being of a decided glaucous green, a tint not common in this class of plants. The leaf-stalks are prominent also, as they are of a deep red colour and have red spines, each quite half an inch in length.

The Macartney Rose.—Since I wrote my note on the above Rose (p. 352) I have seen three good specimens in the gardens of Gnaton Hall, Yealmpton, near Plymouth. The largest covers a space of wall 10 feet by 8 feet and is growing very strongly, some of the shoots being as much as an inch in circumference. When once established it is evidently a fast grower even in England, and a Rose which, when better known, will doubtless be largely grown. At the foot of the Rose was growing a large plant of Woodwardia radicans.—S. W. F.

Witsenia corymbosa is an old plant not often seen in gardens, but Messrs. Smith, of Worcester, still retain it in their collection of plants, and a group of it now flowering in one of the cool houses in the Worcester nursery gives a welcome tone of colour at this dull season. In habit of growth this plant is very distinct, with leaves like those of a narrow-leaved Iris arranged in a two-ranked manner upon a branched woody stem. The flowers, of a lovely clear blue colour, are numerous, upon an erect branched raceme borne above the points of the pretty grassy leaves.

Cimicifuga simplex.—According to the new "Index Kewensis," the proper name of this plant, which is described by "H. P." on p. 371, is Cimicifuga fœtida (Linnæus). De Candolle ("Prodromus," vol. i., p. 64) describes a variety, C. simplex (Wormst), as differing from the type in having a simple unbranched raceme, and as being found in Kamtschatka, the type being common in Siberia, Russia, and parts of the Austrian Empire. "H. P." describes the plant he saw at Kew as having branching panicles, so it cannot be var. simplex, and I regret that the names authorised by their own index are not adopted at Kew by those who label the plants.—C. WOLLEY-DOD, *Edge Hall, Malpas.*

The Cornish Elm.—Among the many and variable forms of the Elm there is probably none more deserving of the attention of the planter than this. It is a pretty tree, with a distinct pyramidal, erect habit of growth, and consequently easily recognised among other Elms, even in quite a young state. It is also a good town tree, and its upward habit of growth consequently fits it for street planting, for which purpose it is preferable to the wide-spreading Wych Elm, that has to be lopped into ugliness to keep it within bounds, and last, but far from least, its wood is exceedingly tough, and of high commercial value in consequence. Messrs. Smith, of Worcester, think highly of this Elm, and we were reminded of its usefulness and beauty by seeing the large stock of trees of this kind in their nursery. Both those who plant for ornament and for timber might with advantage plant the Cornish Elm more freely.

Winter-flowering plants at Worcester.—The middle of the planting season is not the most favourable time for inspecting a nursery such as that of Messrs. Smith and Co., of Worcester, which is mainly devoted to trees, shrubs and hardy plants of outdoor growth, and mostly now leafless and at rest. The glass department of this large nursery, however, is also extensive, and here during a recent visit we saw a number of useful flowering plants that serve admirably to brighten conservatories and greenhouses throughout the winter and early spring months. A batch of Libonia penrhosiensis showed what a bright and profuse-flowering plant this is, the red and yellow-tipped flowers glowing brightly among the leafy shoots. The old Salvia splendens, too, is still unsurpassed for brilliant colour at this, or indeed at any time. Erica hyemalis is too well known to need praise, but this and other kinds, well grown and abundantly flowered, contribute largely to the present gay display of bloom. These hard-wooded subjects are particularly well grown here. We noted quantities of Epacrises, Genetyllis and Pimelea spectabilis in perfect health and vigour. Cytisus racemosus elegans, also grown largely, is a distinct plant alike in leaf and blossom, as it has long, pretty leaves of a silver-grey colour, and the flowers, already showing in the bud state, are as large as those of the Laburnum and rich yellow in colour. Other plants not now calling for detailed mention—being out of bloom—are the many stove and greenhouse climbers, all largely grown, and the whole stock of them first-rate. Crotons and Dracænas of a useful decorative size and highly coloured filled a large house, and another structure is devoted almost entirely to the noblest of all the Maiden-hairs—Adiantum Farleyense.

Rose Catherine Mermet as grown in Paris.—Will anyone tell me how to grow Tea Rose Catherine Mermet in pots so as to have it a mass of blossoms and buds during November, as it is seen in the shops in Paris during that month? The plants are large and beautifully trained.—O. A.

Names of plants.—*Ina.*—Impossible to name from leaves.——*S. B. Bamford.*—Utterly impossible to name from the scraps you send.——*J. B.*—Campanula carpathica.

Names of fruit.—*Robinson.*—Pear Bishop's Thumb.——*Geo. A. Giblett.*—1, Rymer ; 2, not recognised ; 3, Hawthornden ; 4, Hollandbury ; 5, Pear Souvenir du Congrès ; 6, Pear Fondante d'Automne.

No. 1254. SATURDAY, November 30, 1895. Vol. XLVIII.

"This is an Art
Which does mend Nature: change it rather; but
THE ART ITSELF IS NATURE."—*Shakespeare.*

STOVE AND GREENHOUSE.

USEFUL PALMS.

IT is hardly necessary to dwell on the value of Palms for decoration, the immense quantities now grown being sufficient evidence of their popularity. It would be quite safe to say that where ten years ago Palms were grown by the dozen they are now grown in thousands, and still the supply does not exceed the demand. Formerly a good many Palms were imported from Belgium, and at the present time some are still obtained from that source; but if their culture goes on extending in this country at the same rate as during the last few years, it will be quite safe to say that the Belgians will have to find another market for their plants. The Kentias undoubtedly take first place among Palms at the present time, and, considering the immense quantities now grown, one cannot help wondering what becomes of them, for they are not, like many plants, easily killed; indeed, under fair treatment they will thrive almost as well in a house as when growing in the stove. One great feature of the Kentias is that they are useful in any size, from tiny seedlings with about three or four leaves up to any size which can be accommodated. In a small state

KENTIA BELMOREANA is the best, and for large specimens Fosteriana is grown, as it makes a tall plant much quicker than Belmoreana. When raised from seed individual plants vary considerably. In selecting plants for growing on into specimens those with the recurved leaves should be selected. Some plants will be found with very dark leaf-stalks, and these are generally of good habit. Treatment makes considerable difference in the growth, as plants crowded together and grown in heat run up tall and thin. To have perfect specimens they must have plenty of room from the time they are first started, and although they will make plants quicker in heat, they may be grown successfully under cool treatment and will be more serviceable for decoration. Next to the Kentias named above,

COCOS WEDDELLIANA is the most useful, and although it must be grown on in a stove temperature, if carefully hardened off it will stand well for house decoration. As a choice table plant,

GEONOMA GRACILIS is one of the most elegant Palms. G. intermedia is also very pretty, but few people succeed in growing the Geonomas into perfect specimens.

ARECA LUTESCENS, which before the Kentias came to the front was one of the most popular Palms, may still be regarded as indispensable, especially for tall specimens for using in groups. This Palm is now often grown in triplets. Three plants potted together when quite young form fine specimens. Generally one of the plants will take the lead, and the others, making weaker growth, form a good base. This Palm may be used for decoration, even out of doors during the summer, without any harm being done.

PHŒNIX RECLINATA, as an intermediate-sized plant, is a good Palm, being fairly hardy and of graceful appearance. It does not develop well-characterised leaves until the plants are too large for a 4½-inch pot, but in a 6-inch pot it is a fine plant. I prefer it to P. rupicola, as it is hardier and keeps its foliage better, not being liable to die off from the tips. P. tenuis is also a useful hardy Palm.

CORYPHA AUSTRALIS, though rather stiff in habit, is a useful hardy Palm. If grown in heat and shade it will make longer leaf-stalks, which give the plants a lighter appearance.

LATANIA BORBONICA is extensively grown, and is most effective as a specimen to stand out by itself. Like the above, the character of the plants may be considerably altered by growing them in heat and under shading.

Of choicer sorts which are not so well known as those referred to above, some of the Calami may be included.

CALAMUS LONGIPES AND C. INTERMEDIA closely resemble each other, and both make very pretty table plants.

HYOPHORBE VERSCHAFFELTI may also be recommended, being very pretty in a small state, but a little stiff in a larger plant. H. amaricaulis may also be included.

LATANIA AUREA is another very pretty Palm. There is a variety of L. borbonica with yellowish leaves which is sometimes sold as aurea, but this should not be confused with the true species, which is of slender growth.

ACANTHOPHŒNIX CRINITA is a very pretty Palm with gracefully arching leaves. Of this we get two distinct varieties among seedlings, some having dark reddish leaf-stalks and others pale green; in both the under surface of the leaves has a pale glaucous shade.

EUTERPE EDULIS is a very free-growing Palm and makes a light and elegant plant, but is too tender for general use.

RHAPIS HUMILIS is a very useful sort. This may be propagated by taking off the offsets from the base of the old plants, but this should not be done until the offsets have made some roots.

CULTIVATION.

In growing on young plants, almost all of the Palms may be grown in heat. Provided a moist atmosphere is maintained, it is almost impossible to give Palms too much heat. For those who do not grow Palms in large quantities, it is better to procure young plants than to depend upon seed. In almost all instances the seeds lose their vitality in a very short time; in fact, it often happens that the whole of a large consignment perishes in transit. Last season I saw Kentia seeds which had evidently been in fine condition when collected, but which had been packed dry, and when the cases were opened every seed was found to be dried up. In all cases where seed is received, it should at once be put into moist fibre or moist sand. The large Palm growers sow the seed as soon as possible after it is received. In potting young Palms care should be taken not to damage the tap-root, or the plants will not start away well; this is especially the case with Cocos Weddelliana. For young plants good fibrous loam and sand should be used, and for larger plants a little manure may be added, and the plants should be potted firmly, taking care not to get them down too deep in the pots. I find it is much better to confine Palms to as small pots as possible. They are not only better to handle when using them for decoration, but will generally be found to keep in better health, for in large pots they are almost sure to get too wet at the root through the frequent syringing. After the soil gets wet and sour the plants will soon get into a sickly state. I believe it is a common error with many to think it impossible to over-water Palms. A moist atmosphere is beneficial, but too much water at the roots is quite as damaging to Palms as it is to any other class of plants.

In selecting Palms for decoration, those with leaves in a partially developed state should never be used, as these are very tender and easily damaged. If carefully hardened off, almost any of the Palms will do a lot of service without suffering much, but to take them straight from a moist stove for one night will almost ruin them. A. HEMSLEY.

HYBRID TUBEROUS-ROOTED BEGONIAS.

TUBEROUS-ROOTED Begonias, unknown 25 years ago, have now become so popular, that they may be seen in every garden. The parents of this race were B. boliviensis, B. Pearcei and B. Veitchi, introduced respectively in 1865 and 1867. If my memory is right, the first hybrid (B. Sedeni) was raised in 1869 from B. boliviensis × B. Veitchi; then in 1874 the red-orange-flowered B. Chelsoni was obtained from B. Sedeni × B. boliviensis. These two varieties had large, brilliant, nodding flowers, but not widely opened. In 1875-76 the true B. grandiflora arose in many colours with fully expanded flowers. In 1878 the true race erecta was obtained. It is from that date to 1885 that the greatest improvements were made amongst tuberous-rooted Begonias. Specialists, gardeners and amateurs set to work. Since that date the race has been considerably improved; the foliage is broader, closely set; the plants are dwarf; the flowers enormous, the average size being 4 inches to 5 inches in diameter, and the flowers quite erect. In some French nurseries one hundred thousand plants in all shades of colour can be seen in bloom in autumn. In the meantime, about 1875-76, M. Lemoine raised the first double variety, called Gloire de Nancy, which was soon followed by scores of others of various shades. Double Begonias are not sufficiently appreciated. When well grown their flowers are really marvellous, having the shape and size of a true double Balsam, whilst the finest varieties can be compared to a Camellia. Among seedlings, double and semi-double forms are produced; the former only have a real value. During the past few years tuberous Begonias have been somewhat neglected for bedding, B. semperflorens and varieties being substituted, but this is a temporary change. The persevering growers have not been idle, and have worked so skilfully, that they offer us now the following wonderful forms:—

SINGLE-FLOWERED.

HYBRID TUBEROUS.—The first varieties obtained were slender, reaching 20 inches to 30 inches high, the flowers of various shades, spreading, horizontal or nodding, and more or less expanded, as stated above.

TUBEROUS GRANDIFLORA.—An improvement on the preceding, the flowers much larger, of nearly all colours; the petals very large, ovate, of great substance, quite flat when fully expanded.

TUBEROUS GRANDIFLORA ERECTA.—This is the finest of the race. The plant is compact, bushy, the flowers quite erect, of very large size, overtopping the foliage, the largest noticed in France being 8½ inches across. These flowers are of nearly all shades, excepting blue and black. There are thirty distinct colours grown separately—fifteen true and fifteen false hues. A bed of perfectly true, erect, large-flowered Begonias is a grand sight, but it is under glass in a temperate house they form the grandest display and are the most conspicuous.

WHITE CENTRE FLOWERED.—This new strain has the flowers single, erect, of large size, the centre of which is shaded pure white. Up to this date this hue is to be observed only in red, light pink, dark rose, and salmon ground coloured flowers.

WIRY, OR IRON-STEMMED (*tige de fer*).—This name implies all varieties of single and double, which are dwarf, compact, with short, erect, rigid-flowering stems.

DWARF.—A selected strain of dwarf, bushy, large, single, erect-flowered plants, most suitable

for borders, edgings to beds, or for carpeting the ground under tall plants.

Striped flowered.—This curious type was offered to the public a year or two ago. It reminds one of striped Azaleas or Carnations, the flowers being erect, large, and of good substance, elegantly striped on white, pale yellow, pink, deep rose, and carmine grounds. Shortly every shade will be included in the list.

Spotted.—An entirely new tribe of large, erect, single-spotted flowers. The aim of the specialist is to bring this race as perfectly spotted as Gloxinia punctata. Not to be had in the trade yet.

Bearded.—This is a sensational novelty. The flowers are single, erect, large, of good substance. In the centre of each petal is a prominent, erect excrescence resembling a beard, of the same colour as the ground of the flower.

Primulæflora, or Primrose-flowered.—The flowers are single, erect, large, of a perfectly circular form, the four petals being of equal size and fringed exactly like a flower of Primula sinensis fimbriata. This race is still in its infancy, and will require two or three years before being brought to perfection.

Double-flowered.

Tuberous double. — The old strain with spreading flowers.

Tuberous double erect.—Flowers very double, of great substance, of nearly all shades, perfectly erect. The plants affect a neat, regular bushy form.

Multiflora erecta (double).—This strain is truly one of the best improvements in florists' flowers of late years. They were raised in 1885 and sent out in 1890. The bulbs produce four to six slender short-jointed stems with small foliage, forming most beautiful dwarf, compact bushy tufts, covered with a mass of bloom from June until frost comes, from 6 inches to 12 inches in height. The flowers are small, very double and erect, lasting a long time. From their brilliant colours they are of the greatest value, I should say the best, for the flower garden. For pots they are useful. The cut flowers are much employed for bouquets. The leading varieties obtained are Multiflora gracilis, 6 inches high, the dwarfest; flowers very small, strawberry-red colour, the best for borders. Aurora multiflora, 8 inches high; flowers small, salmon or coral-red, dwarf and compact. Mme. Louis Urbain, 8 inches high, deep rose, very compact. L'Avenir, 8 inches high, bright cherry-red, very compact, one of the best. Mme. A. Courtois, 8 inches high; flowers creamy white, forms regular compact tufts, one of the best for bedding. Lutea nana, 8 inches high, clear yellow. Henri Urbain, 10 inches high, bright red. Coquette de Clamart, 10 inches high, bright deep pink. Soleil d'Austerlitz, 12 inches high, bright vermilion colour; flowers very small, extra. Rosea multiflora, 12 inches, pale rose. Eugène Verdier, 12 inches high, orange-red, flowers a little larger. Lafayette, 16 inches high, fiery red, most brilliant colour, the tallest. Davisi (double) is a very fine variety, with brown leaves and bright red double flowers, both arising direct from the bulb, forming neat, dwarf plants 6 inches to 8 inches high. With the above colours it is very easy to form beds and borders of striking and most showy contrasts; in that case they are far superior to B. semperflorens, to which they ought to be preferred. They have the great quality of keeping their fine habit and regular form until frost. Even when planted very early they do not get shabby or outgrown, as many other tuberous sorts; they are of no value for winter-flowering. Their culture is easy, succeeding best when planted in the full sun, which is a special quality. Start the bulbs in April in soil in a frame, and give plenty of air as soon as vegetation commences. In May, plant in open ground 6 inches to 8 inches apart. Do not use a very rich soil; sandy porous loam, with a third or a quarter of leaf-mould, is sufficient. At the end of October, take up the bulbs and store them like other tuberous Begonias. They are easily increased from cuttings.

Double Chrysanthemum-flowered. — The petals of the flowers, which are quite double, have been changed into long, narrow, linear, spreading strips, giving the flower the appearance of a Chrysanthemum, nearly of all shades.

I believe the above list includes every form of tuberous Begonia known up to this date. Begonias will always produce a fine display when used in borders, on rockeries, and at the foot of the trees, provided these places are shaded or half-shaded. A bed of red, orange, or dark purple bordered with pure white produces a most striking effect. When grown in large pots they can be had in all their splendour, and are of the greatest value for the drawing-room, the windows, and the conservatory.

Culture.

Begonias prefer a very rich, light, porous soil (loam, leaf-mould, peat, and sand mixed in equal parts). Procure good sound tubers one or two (not more) years old; in February or March lay them on light soil (leaf-mould or cocoa-nut fibre) in pans or on a hot or temperate bed, under a frame or in a greenhouse, so as to start into growth; keep moderately damp. When the roots and the leaves are developed admit air until the middle of May and take off the lights. At the end of May when the beds are ready, take up the plants with the ball of soil attached and plant 12 inches apart. Give a good mulching of leaf-mould, cocoa-nut fibre, or Moss, and plenty of water during the summer. At the end of October cut off the stems, lift the tubers, take them into a dry, airy place, and a fortnight after they may be cleaned and kept dry, or placed in dry sand, in a frost-proof place until spring. The best and most active manure is blood mixed in small quantity with the soil before planting. On plants grown in pots it produces astonishing results. Begonias started into growth in March and planted in open ground at the end of May will look rather overdone in August and September, and so it is with zonal Geraniums; therefore careful gardeners have adopted the following system: They start the tubers in May, pinch the stems and the flowers until the end of July, getting in this way strong vigorous plants in August, when zonal Geraniums look overdone, or they take them up or throw them away and fill up the beds again with these prepared Begonias. This process ought to be adopted in every well-kept garden. Liquid manure and other fertilisers carefully and cautiously applied will prove most beneficial and increase the size of the flowers, chiefly on pot-grown plants. Do not be afraid of moving the plants about in the open ground during the summer; if plenty of water is given, the growth will be checked for twenty-four hours only.

Propagation.

The easiest and quickest way is by seeds. In February, March or April fill up well-drained pans to within half an inch of the rim with fine soil, half peat and half sand, or half leaf-mould and half sand, the whole well mixed. Sow the seed rather thinly; do not cover, but make the soil firm with the bottom of a flower-pot or a piece of glass; cover the pan with glass and water through the bottom, never overhead. Place the pans in a stove, a temperate house, or on a bed under a frame close to the light. Every morning dry the sheet of glass and water when needed; in a few days the seed will come up thickly. As soon as possible prick off the strongest seedlings and plant them in other well-drained pans in same soil half an inch apart, keeping them at the same temperature. As soon as these transplanted seedlings have filled up their room, replant them again into a more substantial soil into pans 2 inches apart, or on a bed 6 inches apart, under a frame, where they will stay until June, the time of planting them in the open ground. They will flower in July and make fine plants and tubers by October. When the season advances and the seedlings are getting stronger, air must be gradually and, finally, freely admitted under the frames. Tubers from sowings made after June are not sufficiently hardy to undergo the winter. Some gardeners start the bulbs in March, cut them into pieces (leaving an eye to each division) and plant them as adult plants. It is a barbarous and slow process which ought to be entirely abandoned, the plants being much inferior to seedlings.

New or rare varieties and the double ones are propagated from cuttings made with young herbaceous shoots from February to April. These cuttings inserted in sand, or cocoa-nut fibre, under glass, strike rapidly and make excellent plants for planting in the open ground in June. Some growers propagate them in summer. Three or four cuttings are inserted in August in the same pot and kept under a close cold frame, where they remain until starting time, but must be protected against frost in winter. These cuttings strike readily provided they are obtained with one or two eyes, and the bulbs produced are most valuable for spring planting, but do not expect a good result on more than fifty to seventy per cent. of these cuttings. Cuttings made with leaves will not strike. Open ground Begonias may be kept in full bloom until November if covered over with linen material; this covering must be put on every night and taken away every day if weather allows.

D. Guiheneuf.

Statice floribunda.—This is one of the finest of the greenhouse varieties, but it does not seem to be so well known as it deserves. Growing side by side with S. profusa and S. Butcheri, it is certainly the best of the three. The leaves, which are ovate, have a crimson shading, which is more decided in the stalks and ribs. It is dwarf in habit and, as its name implies, very free-flowering. I first saw it at Messrs. Lee's Hammersmith Nursery a few years ago. I find this firm exhibited it at a meeting of the R.H.S. in 1883, when a first-class certificate was awarded. The Statices, like a good many other fine greenhouse plants, are somewhat neglected at the present time, but where they do get proper attention they make a fine show. Young plants are preferable to old specimens. Cuttings will root in a cool propagating pit, but a little bottom heat is beneficial. The cuttings should be taken off with a little of the old wood at the base, and put in singly into small pots, using sand and peat in equal parts. As the cuttings take some time to root, care must be taken, as they are liable to damp off. When well established they may be potted on, using a good portion of fibrous loam with the peat and sand. Plants propagated now will make useful flowering subjects for the following season. Statice Holfordi, a larger growing species which used to often be seen among specimen exhibition plants, is rarely met with now, though for the conservatory there are few plants which will keep up a bright display for so long a period during the autumn. I would much rather grow these old plants well than hunt up novelties of doubtful merit.—H.

Berried plants.—A wide interpretation seems to be placed on the term "berried plants" at autumn exhibitions. At Kingston, where six of these are invited, it seems to be the rule to show anything that carries ripe fruit, but whilst that leads to variety in a sense, exhibitors have the unfortunate habit of putting up their half dozens all of one kind; hence there is yet an absence of variety. The term "berried" seems to be wrong

when Capsicums of the long, red form well grown and fruited, the fruits ranging from 3 inches to 5 inches in length, were admitted. No doubt they were handsome, but, all the same, it is difficult to understand how these all come under the appellation "berried." Next came well-fruited plants of the erect, small-fruited variety, and third, some freely berried Solanums. Plants also of the pretty red-berried Rivina humilis were staged, and these undoubtedly do properly come into the category. They were, however, rather drawn, but well grown. Having compact heads, they should form some of the prettiest of berried plants for exhibition. Still, for all ordinary purposes, being semi-hardy, few plants seem to be more fitted for commendation than are good Solanums, for these will do well in a cool house, where Capsicums and tender plants would soon lose their leafage. No one, so far, seems to have shown Skimmias, perhaps because the limit of size of pot prevents sufficiently established plants being produced in good fruit. Without doubt these berried plants make a very pretty as well as an interesting class, but some more inclusive term than berried seems to be needed, and I think the best would be "ornamental-fruited plants," as thus enabling such things as Capsicums to be properly admitted.—A. D.

The Begonia disease.—I beg to thank all those correspondents who have written (in answer to my note) on this, and to assure them that the disease of which I complained is not caused by thrips or any other insect. Mr. Langdon may possibly know the disease, but I am led to hope not, as he does not describe it properly, for he speaks of the stems being first attacked, or first showing the effects, which then spread to the points of the shoots, while in my case, as I pointed out, the course is reversed. His cultural directions for prevention, too, are wrong, as the disease started in a house principally used for Ferns, and which always has a moist atmosphere, while outdoor plants, and a few others which had made all their growth in a light, airy and dry conservatory, did not suffer. I have had Impatiens Sultani and other plants attacked by the little yellow thrips of which "H. P." writes, and know this insect and its work quite well. I am also able to see it easily with the naked eye. I am in the habit of using a magnifying glass in all cases of plant disease which are unknown to me and which come under my notice. The symptoms of disease mentioned by "G. C." are entirely my own, and boxes of seedlings have been attacked in a cool, shady frame this year. It is possible that steam from the pipes may encourage the disease in some cases, as the worst attack was on plants grown over the hot-water pipes, where drainings from the pots could not be prevented from dropping on them. I have no wish to foster a scare and hope the disease will not spread, but we have still something to learn about it.—J. C. Tallack.

—— "G. C." (p. 365) says he had hoped to see an answer to Mr. Tallack's and Mr. Burrell's notes giving a remedy for Begonia disease. I grow Begonias largely, and was at a loss for some time to know what was the matter with the plants. On carefully examining them I found they were infested with yellow thrips, which begin their work of destruction on the stems and undersides of the foliage and fairly paralyse the plants. The best remedy I find is to fumigate the houses and frames with tobacco on the thrips first making their appearance, and again about three weeks later. By keeping a moister atmosphere I find the plants keep clean and healthy.—F., *London.*

Sowing florists' flowers. — From various causes many fail to secure a satisfactory germination of such seeds as Primula, Cyclamen, Calceolaria and similar small-seeded subjects. Sometimes, of course, the seed is at fault, but more often the method of sowing. It is quite useless to have much depth of soil in the pans or pots; better by far occupy more of the space with drainage, as, although very little water is needed until growth appears through the surface, the soil, if in too great a bulk, soon becomes sour. Frequently the compost used for covering the seed lacks sufficient opening material, such as leafmould and silver sand; consequently it becomes too firm and prevents the seedlings coming through. From this cause the larger-seeded subjects, such as Cyclamens, are often crippled and deformed, even though they come through. I find it a good plan with the majority of flower seeds to cover the pans or pots with a square of glass and then to cover this thinly with Moss. This prevents evaporation and lessens the need for sprinkling. Occasionally, owing to the non-appearance of the seedlings at the proper time, one gets impatient, but it is best to allow time, as, if the seed is old or inferior in any way, several extra weeks will elapse before growth appears. At the beginning of September I sowed a pan of Cyclamen seed, and although it has been in careful hands ever since, the young plants are only just through the soil. When this is the case the best plan is to remove them from the intermediate house to a Pine stove or some such structure, where the lost time can be regained, removing them back again in due course. One of the chief points to be observed is not to give more water than is absolutely necessary either before germination takes place or while the seedlings are in a young state.—J. C.

Chrysanthemums.

SOME NEW CHRYSANTHEMUMS.

At the floral meetings of the N.C.S. and at some of the trade displays there have been seen this season many excellent high-class novelties of quite recent introduction. The tendency is still towards monster blooms in the Japanese section, and probably the largest ever staged were the six magnificent white blooms of Mrs. H. Weeks sent up to the Aquarium on November 11. Next to these I should be inclined to place M. Ernest Calvat's new seedling Australian Gold, Mr. Godfrey's Mrs. Hume Long, and Messrs. Cannell and Sons' Australie. Raisers, with one or two exceptions, appear just now to be studying purity of tint, for the colours of many of the season's novelties leave little or nothing to be desired.

In the under-mentioned list I have given the names and a brief description to such of the novelties as seem likely to be successfully grown and shown in the future, although many fine varieties that a few years would have been hailed with satisfaction and kept in our collections for a long time are now-a-days pushed out of existence, not because they prove to be worthless, but because of the tremendous number of novelties that pour in upon us year after year.

Le Moucherotte (Calvat).—Very large, with long narrow florets, a Japanese variety, colour pure yellow, tinted bronze.

M. Aug. Lacvivier (Lacroix).—A very fine drooping-petalled Japanese; inside colour salmon-rose, with reverse of golden rose.

Mme. Ch. Champon (Calvat).—A large spreading Japanese; long, flat florets, colour white, shaded purple.

M. G. Montigny (Calvat).—Japanese; of large size, but rather loose, very long florets, toothed at the tips, rosy white, streaked lilac.

Floridor (Lacroix).—A Japanese of the incurving type, pointed florets, inside colour deep crimson, centre yellow.

Miss Alice Love (Jones).—A Japanese; florets veined and ribbed, curly at the tips and of medium width, colour white.

Noces d'Or (Calvat).—A Japanese incurved, with narrow or medium grooved florets, rich golden yellow.

President Armand (Calvat).—Very finely-incurved Japanese, with broad grooved florets; colour carmine-chestnut, reverse brassy yellow.

Emily Silsbury (Silsbury).—A large spreading Japanese, with long intermingling florets of medium width; colour dead white.

Phœbus (Lacroix).—A perfect Japanese, with fine drooping florets; colour deep golden canary-yellow.

M. Ch. Molin (Calvat).—Japanese; with flat reflexing florets, rather broad and pointed at the tips, yellow ground, shaded deep bronze.

Boule d'Or (Calvat).—A very fine incurved Japanese, with curly and grooved florets of great breadth; colour golden amber.

Lady Esther Smith (Owen).—Also of the incurved Japanese type. It has very long grooved florets and is a solid-looking flower; colour pure white.

M. Geo. Biron (Calvat).—Japanese; something in the style of the Edwin Molyneux type, but more closely incurved, deep crimson, with golden reverse.

M. Benj. Giroud (Calvat).—A round drooping-petalled Japanese, not too large; also a deep crimson variety.

Mlle. M. A. de Galbert (Calvat).—Japanese, with broad florets, pointed at the tips; colour pure white. A large flower.

Reine d'Angleterre (Calvat).—Very large Japanese; a loose flower of the Condor type, with flat florets; white ground, shaded rosy purple.

Mrs. Charles Blick (Blick).—Japanese, with narrow grooved florets, curly at the tips, large blooms; colour pure white.

D. B. Crane (Jones).—A nicely formed incurved of the old type, a solid-looking bloom with petals of good substance; colour deep golden amber.

Edith Tabor (Notcutt).—A beautiful variety of true Japanese form, long drooping florets, curly at the tips; canary-yellow, shaded lemon.

John Seward (Seward).—Large Japanese with great length of floret, medium in width; fine canary-yellow, shaded lemon.

Mrs. J. Shrimpton (Seward).—Very large in size, a Japanese, having long florets, twisted at the tips; colour orange-yellow, streaked carmine.

Lady Byron (Weeks).—Japanese incurved; large and globular in form, broad grooved florets; white.

Pride of Madford.—A colonial seedling imported by Messrs. Cannell; broad pointed florets; inside colour rich rosy amaranth, reverse silvery amaranth.

Mutual Friend (Mann).—Japanese; very long florets, curly and deeply grooved; colour wax-like white.

Souvenir de Toulon (Calvat).—Japanese incurved; very large, broad, grooved florets; colour pale amaranth, reverse silvery pink.

Mme. Ad. Chatin (Calvat).—Large and finely incurved, of the Japanese type; colour clear white.

Australian Gold (Calvat).—A monster Japanese with narrow florets, very full and double, canary-yellow, tinted lemon.

Kentish White (Cannell).—Japanese incurved of globular form, deep grooved florets, rather broad; colour pure creamy white.

George Haigh (Owen).—A golden buff sport from the incurved Robert Petfield, which it resembles in other respects.

Mme. Ad. Moulin (Calvat).—Japanese, with long drooping florets, large and deep in form, white.

Mme. Paul Lacroix (Lacroix).—Japanese; also very large, colour pale sulphur, passing to primrose.

Deuil de Jules Ferry (Calvat).—A rich and striking novelty in the Japanese section, long drooping florets, colour velvety violet amaranth.

Mrs. Briscoe-Ironside (Briscoe-Ironside).—Japanese incurved; fine form, colour pale salmon-blush.

M. Chenon de Leché (Calvat).—Japanese, with reflexed drooping florets, centre primrose-yellow, shaded bronze, outer florets rosy.

Baronne de Buffières (Calvat).—Japanese incurved; florets of medium size, pale lilac, reverse silvery pink.

Major Bonaffon (Dorner).—An incurved, with a multitude of narrow pointed florets, pure yellow of rather a pale shade.

OCEANA.—Another colonial novelty, introduced by Messrs. Cannell. A fine massive Japanese incurved, with broad grooved florets, colour golden yellow.

MRS. WEEKS (Weeks).—One of the largest Japanese; very broad florets, curly, and intermingling, colour pure white to blush.

MRS. HUME LONG (Godfrey).—A large incurving Japanese; florets grooved and of great length, colour rosy amaranth, reverse silvery.

C. HARMAN-PAYNE.

CHRYSANTHEMUMS AT SWANLEY.

SWANLEY has for many years been renowned as one of the places where the popular autumn flower receives a large share of attention, and Messrs. H. Cannell and Sons have on many occasions contributed important additions to our lists of select exhibition varieties. A week ago their large show house (160 feet long by 25 feet in width) was, and no doubt still is, a blaze of colour, all the good standard sorts being on show, besides a large number of the novelties for the present year.

Continental seedlings are an important feature at all the trade displays this season, and Messrs. Cannell are not behind other introducers in keeping their collection up to date. M. E. Calvat's novelties are in great abundance and are very highly thought of at Swanley, the principal varieties being Souvenir de Jambon, a Japanese incurved with medium-sized florets, chestnut-crimson, reverse old gold; President Carnot, of the same section, carmine-crimson in colour with a buff reverse; Amiral Avellan, a bright golden yellow Japanese, very rich and striking; and Reine d'Angleterre, a large, loose Japanese, colour purplish mauve and better in tone than we have seen it elsewhere. From the same raiser, Mme. Ad. Chatin, a white incurving Japanese, is good, as is M. Pankoucke, a fine yellow Japanese introduced last season. Mrs. C. Harman-Payne, M. C. Molin, Mme. Carnot, Mlle. Thérèse Rey, M. Gruyer, l'Isère, and several others prominently shown last season are also in excellent form. Newer kinds such as Directeur Tisserand, a yellow Japanese, suffused crimson; l'Aigle des Alpes, a Japanese with flat florets, colour reddish crimson, golden buff reverse; M. J. Ginet, a large spreading Japanese, deep rosy amaranth with silvery reverse, a fine flower; Mme. C. Champon, a rosy lilac Japanese, all promise to maintain the reputation of the raiser.

Among American kinds—which seem to do well this season, probably on account of the fine summer we have had—the far-famed variety Philadelphia must be mentioned. Here, as elsewhere, Philadelphia is not white, as was expected, but of a sulphur hue. G. W. Childs is very rich in bright velvet crimson, and of good size; Col. W. B. Smith, golden amber; Mrs. E. G. Hill, rather an early variety, pale blush in colour; and the newer Major Bonaffon, Japanese incurved with narrow grooved florets, colour deep golden yellow, are all striking in appearance. W. G. Newitt, pure white, is still worthy of a note. International, large Japanese, but not constant in colour, runs coarse almost everywhere; but in yellows, W. H. Lincoln and H. L. Sunderbruch exemplify the purity of tint so much prized by the transatlantic growers.

Two noteworthy varieties are Eureka, a large white Japanese raised by the Swanley firm, with broad florets, and Sidney B. Levick, a fine globular Japanese, with florets deeply grooved, rich reddish crimson inside, and reverse of golden buff. Well-known varieties like Charles Davis, Avalanche, Sunflower, Rose Wynne, Viviand Morel, and Mrs. Falconer Jameson are also grown well and in quantity. There are a few interesting seedlings raised in Australia and imported by Messrs. Cannell, all of the Japanese type, Pride of Madford, a rich tone of rosy amaranth with silvery reverse, being a conspicuous example. Another of these colonial seedlings is M. Van den Heede, a Japanese with long drooping crimson florets, the reverse old gold. Oceana is another, and although only partly expanded at the time of our visit, bids fair to occupy a prominent position. It is a massive-looking Japanese, having broad, twisted, and curly florets, the colour a rich golden yellow. Australie is also a substantial flower; colour pale rosy amaranth, reverse silvery.

Among other novelties are some curious varieties bearing the native Japanese names, but these will be later in coming into bloom.

Incurved varieties are represented by Baron Hirsch, D. B. Crane, a golden buff, C. H. Curtis, fine yellow, Globe d'Or, and several others of older date; Anemones by Descartes, Delaware, Junon, and similar well-established kinds. In one corner of the greenhouse was a fine group of the new Japanese incurved Kentish White, recently certificated and described in THE GARDEN on page 349. Pallanza, Mr. Briscoe-Ironside's, golden yellow seedling Japanese, is also a fine addition to its class, and of a similar shade is M. P. Deswolfs. Mme. Sarlin is distinct, a Japanese, colour chestnut-crimson, with old gold reverse. Kentish Yellow is a Japanese reflexed flower, of a pretty pale canary-yellow.

A large portion of the structure is devoted to new seedlings raised by the firm. These are grown very dwarf the first year, or from 1 foot to 2½ feet in height, with only one bloom on each. Then the second year they are tried from cuttings and grown in the orthodox manner, by which means their value can be more readily gauged.

CHRYSANTHEMUMS AT SYON HOUSE.

IN the fine collection of Chrysanthemums grown at Syon House all sections of the flower are well represented, the singles and dwarf bush plants as well as those bearing large show blooms. Good old kinds may here be seen side by side with the most recent novelties, and losing nothing by the comparison. At the present day newness of variety is allowed to weigh heavily in the judge's estimation, but it does not follow that the good kinds superseded are replaced by better ones. Plenty of evidence to the contrary can be gathered from any good collection grown in a private garden, as at Syon. Among those we noted recently in good form here are G. C. Schwabe, particularly rich in colour, quite a chestnut-brown, shading to rosy buff; Hairy Wonder, one of the best of its class, free in growth and bloom, with a good comparison in Enfant des Deux Mondes, a counterpart in pure white. Louise, a white incurved Japanese, was good, and Beauty of Exmouth charming with its long recurving petals. L'Isère has a pretty cream-coloured flower made up of long curled florets, and Charles Davis was noted for its richness of colour here. William Holmes is just the type of flower required in gardens, full, globular and bold both in appearance and colour, its crimson petals tipped with golden yellow. Silver King, of a lovely silvery pink colour, gives a welcome shade, and Eda Prass is equally as desirable, refined in form and of the tenderest pink colour. Col. Smith is evidently a kind that will stay long in private collections. It is a good grower, and, though showing much variation in form, always has good flowers of a rich and telling colour in any group. Lilian Bird has a unique flower. We have not seen it in any show stand this season, and perhaps it lacks size for that purpose, but in its own distinct and pretty form it stands out conspicuous from the lot. The petals are long and narrow, making a light starry flower of a soft mauve-pink colour. Percy Surman, an incurved Japanese of a rosy shade with silvery reverse, was good, and praise may be given W. H. Lincoln as a Chrysanthemum for all, however they grow it, large plants carrying a number of fine flowers here. Miss Dorothy Shea has loose flowers of a rather pleasing shade of chestnut-brown, Mrs. W. H. Lees was seen in good form, and Amos Perry, a clear soft yellow Japanese incurving towards the centre, is a new and very pretty kind. The true incurved forms were also well represented, the following all having full fine flowers: Robert Cannell, Mr. Bunn, Lord Alcester, D. B. Crane, Mme. Darrier, Baron Hirsch, Jeanne d'Arc, and Brookleigh Gem, the last-named a handsome new variety bearing well-finished flowers striped with lilac on a white ground.

Chrysanthemum Chas. H. Curtis.—In my notes on new varieties at Trent Park (page 373) I made a mistake in regard to the above incurved sort. I intended to have included it among those at the time of my visit I thought promising, as it was then just unfolding its petals. The blooms in question finished remarkably handsome specimens, which were among the best exhibited by Mr. Lees. At one important show he obtained the award of premier incurved bloom in the exhibition with Chas. H. Curtis, thus stamping it a sort of more than ordinary value. I have also repeatedly seen it in good form lately, and although in some cases it has an unmistakable Japanese incurved look, it is a most desirable acquisition. The yellow is rich and its form noble. It is an English-raised seedling.—H. S.

French show Chrysanthemums.—The leading varieties, as evidenced by the season's showboards—independent of the newly-introduced varieties of the present year—are Mrs. C. Harman-Payne, Viviand Morel, Souvenir de Toulon, Mlle. Thérèse Rey, Etoile de Lyon, Boule d'Or, Mme. Carnot, M. Pankoucke, Vice-President Calvat, Deuil de Jules Ferry, Souvenir de Petite Amie, Mme. M. Ricoud, Van den Heede, Commandant Blusset, Mme. Ad. Moulin, M. C. Molin, M. G. Montigny, M. Bernard, Vice-President Audiguier, Alberic Lunden, Mme. E. Rey, Bouquet des Dames, Mme. J. Laing, Mme. Baco, Mlle. Marie Hoste, President Borel, Louise, Mme. C. Molin, Jules Chrétien, Mlle. A. de Galbert, H. Jacotot fils, Mme. Ad. Chatin, Reine d'Angleterre, Mephisto, M. G. Biron, M. Ad. Giroud, Guirlande, Marquis de Paris, Mme. E. Capitant, M. Gruyer, Mme. Oct. Mirbeau and Beauté Toulousaine.—CHRYSANTH.

Popular show Chrysanthemums.—Taking the winning stands in the chief classes at thirty-five of our leading shows, I find the following varieties may be considered as the most popular with exhibitors: Mrs. C. Harman-Payne, Viviand Morel, Charles Davis, Mlle. Thérèse Rey, Edwin Molyneux, Mme. Carnot, Col. W. B. Smith, M. Pankoucke, G. C. Schwabe, Wm. Seward, W. H. Lincoln, Sunflower, Mlle. Marie Hoste, Duke of York, Miss D. Shea, International, Etoile de Lyon, C. Shrimpton, Deuil de Jules Ferry, Van den Heede, Commandant Blusset, M. C. Molin, Mrs. Falconer Jameson, Niveum, and Rose Wynne.—CHRYSANTH.

Hairy Chrysanthemums.—Very few additions to the hirsute section appear to have been made this season, and most of those met with at the shows and at the trade growers are varieties of previous years. Louis Boehmer is one of the most plentiful. Vaucanson, somewhat deeper in colour and rounder in build, is still met with occasionally. Perle d'Or is new, but rather thin in the floret; it is a clear shade of pale yellow. Papa Bertin has long florets of tubular form, which are open and curly at the tips, colour pale silvery pink. Hairy Wonder, reddish bronze, is one of the best, and Mrs. Alpheus Hardy, the forerunner of this new group, has been seen large and well developed at several places. King of the Hirsutes, with long, tubular florets, colour rich golden yellow, and W. A. Manda, something similar in tone, also remain in cultivation. P. Marieton is new, a Japanese in form, large and solid, and of a golden bronze tint. Enfant des deux Mondes, or White Louis Boehmer, as it is sometimes called, is one of the best whites we have. Esau is well deserving of its name, for it is thickly covered with short hairs, and has tubular florets of a rosy amaranth colour. Glasnevin is deep purple-amaranth; Prima Donna, chestnut-bronze. Sautel 1893 and Souvenir de l'Ami Coye, both white or pale blush varieties, are the only others I have seen worthy of mention.—C. H. P.

ZEALS HOUSE, WILTS.

Zeals House is so called from the family of that name. In 1564 it passed into the Chafyn family till 1712, when the property became centred in the family of Grove by the marriage of John, son of Hugh Grove, of Chisenbury, Co. Wilts, with Mary, daughter and heiress of William and Mary Chafyn, of Zeals. This Hugh Grove was beheaded, with several others, by the Commonwealth on May 16, 1655, for his loyalty in proclaiming Charles II. King of England at South Molton, in the county of Devon. The room in which Charles II. is reported to have slept after the battle of Worcester is situated in the N.E. wing on the second storey, and is said to be in the same state now as when the king slept in it. The Elizabethan manor house standing on rising ground above an artificial lake, with its picturesque boat-house (as shown in the engraving), is occupied by Mr. Percy J. Browne as tenant of Mr. G. Troyte-Chafyn-Grove Zeals House is not remarkable for fine gardens, though the effect produced by the judicious planting of trees makes the pleasure-grounds and park very charming. A fine avenue of Elms leads to the house on the north, and prominent amongst the giant specimen trees around the house is a magnificent Tulip tree on the lawn to the east. The "nun's garden" to the north is a pretty little walled garden by the house filled with Ferns and many an old-fashioned and sweet-scented flower. The kitchen garden on the western slope is well planted and cared for, and contains several greenhouses and a small lake with pretty island in the centre. Zeals House contains many interesting relics of King Charles. John A. Lloyd.

The Vicarage, Mere, Wilts.



Zeals House, Wilts. Engraved for The Garden *from a photograph sent by Rev. J. A. Lloyd, Mere Vicarage, Bath.*

Kitchen Garden.

BRUSSELS SPROUTS.

These this season are not all one may desire. The growth is coarse with open sprouts up the stem instead of the hard bullet-like growths so much appreciated. Of course this remark applies to private gardens, as I notice in market gardens there are better plants. This vegetable succeeds much better in some soils than in others, and my remarks as to field culture show that by having the crop more exposed, the sprouts are better, the plants hardier and less subject to insect pests. On the other hand, I have noticed that this season the growth is more irregular, and many growers have coarser plants with fewer firm sprouts. To some extent I think this is the cultivator's own fault, the weather also being to blame, as for months we had much heat and little moisture. I think coarseness and poor quality are encouraged by early sowing in heat. From close observation for some years I have found the best quality and the greatest quantity of sprouts are obtained from plants raised early in March on a sheltered border. I do not say that Brussels Sprouts can be grown well on poor land without manure, quite the reverse, as in such seasons they suffer quickly if not supported with food in the way of good decayed manure. In stiff good loam there is less need of food and the plants are better able to resist drought, whereas in light soils such plants assume a bluish tinge and soon attain uneven proportions, the sprouts being poor and lacking solidity. Brussels Sprouts should never be less than 3 feet between the rows, and if a large variety is grown, a yard apart all ways is none too much. The smaller-growing kinds should stand quite 2 feet between each plant.

I never saw such a mixture of plants as this season, with great length of stem and few really good sprouts. In a quarter of a favourite kind—the Paris Market—I have a much larger variety mixed with it. I think it must be the Imported, which at one time was most reliable. Now it is much too coarse and tall, and I do not advise its culture. The much-praised Aigburth is too coarse, and in such seasons as this, when rain came and the soil was so warm, growth was very rapid and the distance given above would not be anything like enough. I have a grand lot of dwarf plants of Veitch's Paragon, which are covered to the soil with firm sprouts. These were sown in the open, but not allowed to remain too long in the seed bed; the quality and growth are all one can desire. These will remain good till January, when an April sowing comes in. The same remarks apply to Sutton's Dwarf Gem. This I have grown sown at the same time as Paragon, and am much pleased with it, the sprouts being medium-sized, solid, and of a nice green colour and splendid quality. I note these last-named varieties, as they are so superior in every way. The same remarks apply to Northaw Prize, a small grower, with closely-packed sprouts. —G. Wythes.

—— On all hands one hears complaints of the tall, ungainly growth of Brussels Sprouts. I myself have visited several root shows and found this vegetable in each case unsatisfactory, the stems being furnished with large coarse sprouts intead of hard bullet-like knobs. I think good results might be made much more certain by treating the young plants much in the same manner as many treat winter and spring Broccoli, viz., planting not only on land free from fresh manure, but which has not been turned up for a considerable time. Where practicable, the plot from which this season's crop of spring-sown Onions was taken might be set aside for Brussels Sprouts during the coming year, the surface not being interfered with beyond clearing with hoe and rake, and drawing slight drills to plant in. Onions, being generally well provided for in the way of manure, the ground would be quite rich enough for sprouts, and its firm condition, while encouraging hard, fibrous roots, would likewise retain moisture better and have the advantage of a more even temperature. These conditions are essential for the production of good stocky stems of Brussels Sprouts in a variable climate like ours, another important point being not to sow the seed too early.—J. C.

Spinach.—Spinach will be scarce in this neighbourhood during the early months of next year, all late sowings having become badly affected with the "yellows." I usually manage by late and successional sowings to keep up a good supply, but shall have great difficulty in doing so this year. Seldom, indeed, is the loss so general, and one seems powerless to prevent these attacks in certain seasons, or to nurse the plants back into health again once they become affected.—J. C. Tallack, *Livermere Park.*

The Spoon Gourd.—Whether this is a variety or a distinct species I cannot say, but I am inclined to think the latter. I have grown some scores of different Gourds, but I do not know of one at all like it. The seed is from America. Last spring I put out two plants on a few barrow-loads of fermenting material, with a small frame over them until it was filled, when the glass was removed. They have spread many yards every way, and the most remarkable feature about them is that they fruit at every joint even to the very points. These plants have had hundreds of fruit on them about the size of small Pears, of that shape, with an elongated end towards the stem, pale yellow, with orange stripes. The shell is of a hard, woody nature, like the Calabash. If cut longitudinally and the seeds and packing scraped out, it forms a spoon, which is used in America for such matters as would render the use of metal objectionable. The prepared specimen sent will show the fitness of its name.—J. M., *Charmouth, Dorset.*

Books.

THE POTATO.*

Of late years there have been no noteworthy additions to Potato lore, and after such a thorough and exhaustive treatment of the subject as that before me, it is to be hoped it will be several years before other writers attempt anything of the kind. Mr. W. J. Malden has had a large and varied experience, and, unlike some of our professors, is actually engaged in cultivating the "noble tuber" on a large scale for the markets. It is not, therefore, a case of growing a few rods of Potatoes and using the estimate of returns per acre on what is done on such a puny scale. I do not for one moment dispute the accuracy of some of the reports on Potato trials, but they are misleading all the same. In the work under notice I fail to find anything that is misleading, but, on the contrary, the author carefully avoids exaggeration, never fails to point out where conditions have been favourable to the production of extra heavy crops as well as unfavourable to their growth, and not a cultural detail is omitted. As a matter of fact the work is at places rather too prolific, and would prove more acceptable and instructive if more concisely written. For instance, on p. 87 the following occurs:—

> It is important that when Potatoes are cut they shall be planted within a very few days. If left in a heap they are liable to heat, which causes much injury to the young shoots. It is better, therefore, if from

* "The Potato: In Field and Garden." By W. J. Malden. Published by the *Mark Lane Express*, 150, Strand, London.

any cause the sets cannot be planted at once, that they should be sprinkled with quicklime, which cauterises the cut portion and prevents waste of sap. Seed dressed with lime in this way is less liable to insect attacks. Liming is therefore a useful practice at all times.

All this is sound advice, but why go on to say—

It is highly important that cut seed be not left in large heaps, as it rapidly ferments. The chief injury arising from cutting is occasioned by fermentation, as the eyes are killed or weakened. Always spread cut tubers thinly about the floor of a barn if circumstances prevent their being planted immediately after cutting.

Better Mr. Malden had condensed his information so as to be able to present a book that could be sold at popular prices without impairing its usefulness. Again, who ever saw a Potato with haulm as shown in the illustration of Fidler's Colossal? It looks extremely like a plant of Centaurea candidissima perched on the top of a heap of tubers.

With Potatoes, as with fruit, the cry is for crops of superior quality, and, according to Mr. Malden, the losses owing to over-production—much of it inferior in quality—must have been very severe in 1893. Last year the natural outcome was a falling off in the acreage planted. Thus, the field crop of Great Britain was 504,454 acres, or 20,907 acres less than in the previous year. Even with this reduction it is found that, owing to foreign competition, the yields are more than can be profitably marketed, unless, indeed, disease, drought or frost intervene. Only those obtain high prices who grow Potatoes of superior quality, and it is in this direction and high culture, rather than increased acreage, that our farmers can hope to make their growth remunerative. The author premises this at the outset and never loses sight of it throughout his treatise. What he has to say with regard to foreign competition is to the point, and should be taken note of by those who, either from inexperience or want of knowledge of the real facts of the case, are constantly in the habit of taunting the farmer on his supineness. This is what Mr. Malden says on this portion of his subject:—

On the Continent large quantities of Potatoes are grown, the surplus beyond those required for home consumption being sent to England, and as water freight is so cheap, they reach the English markets more cheaply than many grown in England. It is often urged that English growers should prevent this importation by growing more, but this would not meet the case. As many as possible are sold at home, but those not required are exported, as it is the only way to turn them into hard cash. It is assumed that the profit is obtained on those sold at home.

According to Mr. Malden's experience, many generations of special treatment have rendered the Potato comparatively weak in constitution, therefore more liable to various kinds of disease, and there is much to be said in support of this theory. Holding these views, he naturally favours the substitution of newly-raised varieties for the worn-out older ones, and advises at length as to how to proceed in the interesting work of raising novelties of a really serviceable character. He is quite right in discouraging all haphazard selections of seed parents, as it is owing to indiscriminate crossings and the attaching of importance to one or two points only that have led to so many comparatively worthless varieties being introduced. To be successful we are told on page 13—

In variety-making it is important that the experimenter should be acquainted with all the features of the Potatoes he is going to deal with, otherwise much of his labour will be futile.

And the author further adds—

The points which it is most important to develop are vigour, power of resisting disease, and quality.

After treating upon soils and their preparation, all methods of planting, not omitting that known as the lazy-bed system, which is nearly or quite confined to Ireland, rotations and such like, this chapter being most comprehensive, Mr. Malden gives the results of some interesting experiments in the planting of Potatoes, more especially with a view to proving which are the best times to plant. If these experiments could be regarded as conclusive, then comparatively early planting, or at the end of March, would be the best time to plant, completing the work by the end of April, but nothing of the kind can be proved in a single season. Experiments on somewhat similar lines that I conducted this year have been most contradictory throughout, and if they could be relied upon, horticultural instructors would have to modify their theories considerably. All such experiments, to be of real value, should extend over a series of years and be undertaken under a variety of conditions. Undoubtedly the month of April is a good time to carry out planting operations extensively, but some of the best crops I saw lifted this season resulted from planting late in May. From this we are led on to the study of manures, their application and effect, and the author has no hesitation in condemning the theory that soaking planting tubers in manurial solutions has a beneficial effect upon the crops. The remarks that follow on "seed," that is to say, planting tubers, are to the point, though I am somewhat sceptical as to the stated effect of washing tubers that are to be stored for any great length of time. It appears that if Potatoes are subject to a flooding of one day's duration they will inevitably keep very badly, this pointing to the necessity of lifting before we get floods in October, and of storing in raised rather than sunken "pits." That washing soil from tubers lifted in wet weather should lead to their rapid, wholesale decay, comes as a surprise. Years ago, when exhibiting was one of my weaknesses, all the largest and best formed tubers were invariably washed clean, well soaking in water, if necessary, to soften the soil, yet all these tubers kept admirably and were planted the following season. Varieties are discussed at great length, Mr. Malden only recommending what he has proved to be really deserving of commendation. Nearly fifty pages are devoted to "Diseases of the Crop," the life history, illustrated by numerous diagrams, of the most deadly, and the remedies for each being given. Spraying with the solution of sulphate of copper and lime, known as Bouillie Bordelaise, is considered the best disease preventive yet tried, and well worthy of general adoption. The chapter on digging Potatoes ought to be of special advantage to farmers, a variety of labour-saving machines and methods coming in for description and illustration, and there are also good practical hints given upon sorting, pitting, housing, and marketing. The yield of Potatoes in experimental plots has been at the rate of twenty tons and upwards per acre, but Mr. Malden has never seen more than "fifteen" (presumably tons) in open field cultivation, and believes that, owing to much unskilful treatment, the average throughout the country is less than six tons per acre. In the next chapter it is shown that the cost of producing and marketing the crops is, or ought to be, nearly £13 per acre, and at present low prices Potato culture cannot be very remunerative in any case, and must result in actual loss to the careless grower. Mr. Malden's excellent book on Potatoes ought certainly to be in the hands of every market grower, and private gardeners would find in it much that is interesting and instructive.

W. I.

Heliconia illustris rubricaulis.—Among the many new fine-foliaged plants that appeared in Messrs. Sander's group of plants at the Temple show, none attracted more notice than the plant above, whilst at the show of the previous year, when it first appeared in public, it was unanimously granted a first-class certificate. We lately saw a quantity of it in the St. Albans nursery, and whilst the leaves were as bright in colour as those of the plants shown in May last, some of them were of even larger size, approaching in dimensions those of a small-leaved Musa. It is almost impossible to adequately convey a description of the wonderful leaf colouring of this plant. The midrib of the leaf and the leaf-stalks are bright vermilion-red, but the transverse venation and the subtle blending of several colours through the broad leaf-blade are wonderful.

FERNS.

GROWING IN PATCHES.

MANY market growers not only grow seedling Ferns on in patches of several plants together, but also double them again when potting on into 5-inch pots. This latter system, although it makes bushy stuff quickly, does not in all instances add to the beauty of the Ferns so treated. There are some which when grown on singly do not form such compact bushy plants as are required by the florists for decoration. These may be grown on from seedlings in clumps, and generally one plant will take the lead and grow tall, the weaker plants furnishing the base with shorter fronds.

In this note I did not intend to include ordinary market Ferns, but more particularly to refer to some of the choicer sorts, which when grown singly do not make much show. Instead of growing these on as referred to above I should recommend growing them singly until they have attained a fair size, then putting several plants into a shallow pot or pan. I find ordinary seed pans about 5 inches deep and from 8 inches to 12 inches in diameter are suitable for many sorts. They take about six plants of such kinds as Cheilanthes elegans, C. tomentosa and others of similar habit. Of course these may be grown on from single plants into fair-sized specimens, but the young plants grouped together have a better appearance. Doryopteris ludens, although it makes large bold fronds, is difficult to grow into a good specimen from a single crown. A most effective specimen may, however, be made by arranging a few plants together after they have made some good fronds, say about four plants in a 12-inch pan. Pellæa ternifolia is another which is easily raised from spores, but which, singly, takes a long time to make a good specimen. Platyloma flexuosa may be either grown as above, or if three plants are potted together in a 5-inch pot and suspended, they will make effective objects. Pteris Victoriæ has proved disappointing to some, but if grown on singly from seedlings and then grouped together in pans it shows off to great advantage. I may here mention that though many growers do not succeed with this Fern, I have seen it growing as freely as the ordinary P. serrulata, really good plants being had in 5-inch pots. Some of the larger growing Ferns may also be treated in the same way with advantage. Take Nephrolepis rufescens tripinnatifida as an example. Old plants often produce stunted and distorted fronds, but when grown on from single crowns they under favourable conditions make very fine fronds. Single plants are too thin to produce a good effect by themselves. I might give many more examples, but the above will be sufficient to convey an idea of what may be done.

I have previously recommended raising seedlings to replace such as have become stunted with age, and I venture to suggest that if this practice were carried out to a greater extent than is done at present, the choicer Ferns would be more popular. It is not so difficult as many imagine to raise Ferns from spores; though some failures may occur, yet with care and perseverance most of the choicer kinds may be obtained, and the young plants will not give

so much trouble as trying to keep old and exhausted examples in good health.

The above remarks do not apply to such as the Tree Ferns, Cibotiums, and others, the fronds of which increase in size from year to year so long as the plants are kept in good health and are potted on as they require it.

It not unfrequently happens that the small-growing Ferns get over-potted, while those of vigorous growth do not get so much pot-room as they require for their full development.

A. Hemsley.

GROWING FERNS IN JADOO FIBRE.

There are few more ornamental and more generally useful subjects for conservatory decoration than Ferns. When, therefore, one comes across a specimen of this great family of more than ordinary merit, it is right to mention it. While on a visit to the charming garden of Col. Halford Thompson, J.P., of Eastcliff, near Teignmouth, I noted amongst other, and many, exceptionally good things a grand plant of Adiantum cuneatum suspended from the roof in an open wire basket filled with Jadoo fibre. The accompanying illustration of Gymnogramma schizophylla gloriosa growing in a 7-inch pot in Jadoo fibre, and measuring 4⅓ feet across, shows how well Ferns will do in this material. True, the vigour, the robust health, and the fine colour of the fronds betokened skilful culture, but the plant also showed the value of the material it was growing in. That this new potting material is particularly well adapted to growing Ferns in has been proved again and again. But its



Gymnogramma schizophylla gloriosa growing in Jadoo fibre. From a photograph sent by Col. Thompson, Eastcliff, Teignmouth.

special adaptability for hanging baskets is worth pointing out. For such a purpose it is much more suitable than ordinary Fern soil, because of its (1) lightness in weight, (2) rich and fibrous nature, (3) absorption and retention of moisture, (4) cleanliness to handle, and (5) its adhesive texture. Roots seem to ramify in all directions in Jadoo, and the fibrous roots of the plant, incorporating themselves with the material, make a cohesive mass which requires watering much less frequently, and when not over-watered does not drip, a great objection to hanging plants generally. In Col. Thompson's plant-houses this handsome West Indian Fern is far from being a solitary specimen of successful cultivation. As a matter of fact, the great majority of his plants are grown in Jadoo, and without a single exception all are thriving in such a way as to be a complete answer to anyone asking if this stuff is adapted for potting generally. His Chrysanthemums are the very pictures of health; the flowers are abundant, large, and possess an uncommon brilliancy of colour, while the foliage is of that deep green which may always be taken as a certain indication of good health in a plant. Heaths, Boronias, Azaleas, and many such hard-wooded subjects are doing splendidly in Jadoo; and so also are soft-wooded and tuberous-rooted plants such as Coleuses, Gloxinias, Richardias, Roman Hyacinths, Begonias, and others. Coming on in cold frames were Violets, Strawberries, Genistas, and many other plants, all doing equally well, thus testing to the full the capacities of the material for general purposes. Col. Thompson, as the patentee, is naturally proud of his success, and from the way in which Jadoo has been tested he has much reason to be. A. Hope.

Orchard and Fruit Garden.

PRUNING FRUIT TREES.

Very sound and good practical advice has been given repeatedly on pruning, and how different kinds of trees ought to be cut to produce the heaviest crops of fine fruit, but situation, soil and other circumstances have so much influence on trees, that it is almost impossible to lay down any definite rules as to which is the correct mode of pruning. Beyond stating that sufficient room is necessary for all shoots and branches, avoiding any congestion of the growth or rubbing or crossing of the same, it is never advisable to recommend any particular system for any kind or variety of fruit trees without a full knowledge of their peculiarities on any particular soils or situations. Taking

Apples

first, we have a number of varieties requiring special pruning to obtain the best results. Of these, Yorkshire Beauty, Mr. Gladstone, Irish Peach, Worcester Pearmain, Wealthy, and several more of that class always bear much the largest and heaviest fruit on the points of the shoots. There are other sorts that bear freely at the points of most of the short shoots. Amongst these, Bramley's Seedling, Golden Noble, American Mother, Striped Beaufin, Lord Grosvenor and Lady Sudeley are notable examples; in fact, a long list of names might be given of such sorts, and wherever it is possible to leave those shoots that terminate with a fruit bud, I like to let them remain untouched with the knife, for if the blooms set, the weight of the fruit causes the shoot to have a weeping habit, and my experience is that the same is covered its full length with splendid fruit buds for another season. It must be a very unfavourable spring if these buds fail to set and develop large handsome fruit. Some varieties, like Ecklinville Seedling, need scarcely any pruning beyond merely thinning out the growths, while rampant growers like Warner's King are more trouble to bring into a prolific condition early; but even the strongest growers can be made to produce good crops in suitable seasons by judicious management during the season of growth. The plan that I have practised (with excellent results) with these very vigorous trees is to rub out early all useless shoots, so that those remaining may have ample light, and when the pruning season arrives they are left practically their full length. The year following, these long shoots are covered with fruit-buds, which, as a rule, set so much fruit that thinning has to be done freely. Once get a tree to bear thus freely and no trouble is experienced in securing a crop afterwards, as a check is given to the growth by the weight of fruit produced. Here comes in another item of importance, viz., exhaustion, for though a tree may have been much too vigorous there is a limit to its strength, and a big crop may so weaken it that unless it is liberally treated fruit may be conspicuously absent for a season or two afterwards. As a case in point, I may mention that I had some young bush trees of Gascoigne's Scarlet Seedling that made shoots 6 feet long. These were left nearly their full length. The result was that last year the crop on the same was enormous and the admiration of all that saw it, but this year the trees have proved that the weight of fruit was beyond their power, as scarcely an Apple has been produced and the growth is much weaker. While writing of Gascoigne's Scarlet Seedling, I may state that it is a very fair dessert Apple, and will, I think, take its place as one of that class in the future. In pruning

Plums

it is a question if the knife is not employed too freely, and I believe that many of the deaths experienced in plantations of Victoria may be attributed to this cause. The trees must, of course, be kept within certain limits, or they would soon grow out of bounds. To stop this, a judicious system of stopping the shoots in summer acts admirably; if persisted in and no crowding is permitted, it is astonishing to see the mass of bloom annually on the trees. Gumming is practically absent, and owing to the increased light and vigour thrown into the fruit, it attains a size and colour seldom, if ever seen in the Plums from trees not summer-pruned. Some varieties, particularly Washington, appear to succeed and crop in the best form by the plan mentioned. Jefferson and Kirke's also answer admirably to the method, the fruit taking on a beautiful bloom, combined with size and rich flavour. The great difficulty I have experienced with the trees is that so much thinning of the fruit is necessary. In some seasons the frost has done it too freely, but in others it has been no light task. Plum and Pear trees on walls are often cut in more severely than is desirable to make them look well trained and models of shapely trees, but this is done in many instances at the expense of fruit. By this system of closely spurring in the growths, an unfruitful habit is acquired, and root-pruning is adopted with a view to improve matters, not always successfully. No doubt it is gratifying to hear visitors exclaim, "What a beautiful tree, and how well trained!" It would, however, be more profitable to have good crops of handsome fruit more frequently, and this may be brought about in many cases by allowing more extension of the spurs and not being so particular about uniformity in the branches. If the spurs on Plum and Pear trees on walls are thus permitted to extend to a moderate length with no overcrowding of wood or foliage, trees that have been more or less barren previously will generally come into a bearing state. When the spurs become too long or unsightly, they can be cut out entirely to make room for others, or be shortened back half their length to form fresh shoots and fruit buds. Some practical men contend that the fruit is much larger from trees closely pruned. This may be correct on some soils, but I have not yet found it so, rather the reverse, there being always larger fruit and more of it. Of all wall trees,

Morello Cherries

are the most suitable for exact and formal training without any reduction in the weight of the fruit yield. The largest Cherries I have ever seen were grown on trees that were trained in the most careful manner, every shoot being as straight as a gun-barrel, and each one had just room enough to develop its foliage and no more, being also evenly distributed in every part of the tree; the result was a full crop of grand fruit annually from one end of the wall to the other. These Morellos and also the Sweet Cherries were always pruned before any other trees in the garden, and the capable old chief repeatedly stated that was the reason no gumming of the branches ever occurred. My experience of Cherries since then has borne out his opinion. On badly drained borders the result would probably be different, no matter when the pruning was performed. If possible, I like to have all pruning completed before the old year expires; this includes bush trees of all sorts, but the bird pest inflicts so much serious damage, that it is far from safe to do the pruning so early. Already these feathered enemies have seriously attacked Plum, Gooseberry, and Red Currant trees. Where large quantities of trees are grown, netting is out of the question. Shooting is much the same, as it is extremely difficult to shoot the birds without injuring the trees, and poison is against the law; therefore the grower can do little beyond fretting and fuming at the damage done almost under his eyes. I think £100 would not cover the loss caused by birds amongst our fruit trees last winter, and there are certain portions of the pruning that have always to be left until spring, so that we may try to save a few of the buds.

A word on pruning standard trees in orchards may possibly be of service now, as many will be commencing to overhaul their trees. I would specially urge the avoidance of the travelling pruner, who generally professes to be a thorough expert, and charges so much per tree for putting it in proper order, as he terms it. I have seen a number of these fellows in fruit-growing districts who ought to be never allowed to touch a tree with their implements of mutilation. Their main idea is apparently to saw out big limbs entirely, sometimes close up to the trunk, in others leaving a stump projecting a foot or more therefrom; in fact, doing the very opposite to what should be done. Many orchards of formerly healthy, vigorous trees have been completely ruined by this stupid and senseless treatment, and orchard owners in their own interests will do well to fight shy of such men. Supposing the trees have become a tangled mass of growth, some of the smaller and most congested branches should be removed, gradually thinning out the tops annually, until finally in a few years the heads are well balanced, and the air and sun freely admitted to every portion of the trees. W. G. C.

PEACH CULTURE IN THE OPEN AIR.

The most successful Peach grower in the open air that I am acquainted with always prunes his trees in November. This is Mr. Pearce, gardener at The Cottage, Milverton, Somerset. In this garden is a wall with a south aspect that has been covered within the last few years with trees in the finest health, and that annually bear good crops of fruit. I wish to refer to the system of early pruning adopted by the cultivator I have referred to, because the practice is quite opposite to that pursued by the majority of growers, the early spring months being considered by them to be the proper time. The condition of the trees to which I have referred proves that it is as safe to prune in the autumn as in the spring. As a matter of fact, Mr. Pearce says it is better for the trees to prune directly the leaves have fallen than when the sap is just about to rise in the spring. The regular crops of Peaches which he secures show that he is not wrong in his ideas. It must not, however, be understood that this grower depends on early or skilful pruning alone for his crop. That is only one of the details of management which in all cases are regularly carried out. A thick mulch of rotten manure is laid over the roots as soon as the pruning is completed. This mulch is allowed to remain on the border until it is time to replace it with fresh material. There is no stint in this matter, sufficient manure being laid on to cover the border several inches thick. The disbudding of the trees in early summer, timely nailing in of the branches, and judicious thinning of the fruit, as well as syringing the foliage in the evening are all carried out at the proper time. Some growers may say that such treatment is not applicable in all cases. With such a statement I should not find fault, as I have had to unnail the branches in the autumn so as to get them away from the wall that the growth may get more air to ripen it. Such treatment is all very well in some exceptional cases, but I think it necessary in only a few. If, as in the case I am alluding to, the branches are not overcrowded, the wood will be ripe enough in the majority of seasons to be pruned in the autumn. It is the poorly nourished, indifferently managed trees, where the shoots are laid in so thickly during the summer that the leaves overlap each other, that produce unripe wood in autumn. It would, I am aware, be unwise to prune such trees in the autumn, but this does not furnish a reason why others more skilfully dealt with should not be attended to, especially when such good results are obtained by it as in the case under notice.

J. C. Clarke.

Plum Wyedale.—At page 390 "W. G. C." speaks in praise of this most useful late Plum, and expresses a belief that it is not so generally known as it deserves to be. With these remarks I quite agree. There is also another old-fashioned Plum now little heard of and very seldom met with, namely, the Winesour. True, it cannot be said of this variety that it is fit for dessert, its flavour being rather too acid, but for tarts and general cooking it is invaluable during the latter part of October and early in November. When living near Birmingham I had a tree of Winesour under my charge, and I have kept fruit of it perfectly sound till November 20 by cutting some of the fruiting branches and inserting them into Mangold Wurtzels, placing them in a cool, dark place. Anyone contemplating planting a collection of Plums would do well to include a tree or two of each of the above varieties.—J. C.

Gathering Pears.—"Y. A. H." (p. 378) has some very suggestive notes on this subject. The effect of maturity on flavour seldom receives the careful attention it deserves. A fine Jargonelle on a gable end was my first teacher on this matter. Its owner knew every phase in the development towards the highest quality in Jargonelle Pears, and could tell to an hour when to gather and eat them. This grower carried the gathering of his Jargonelles to the level of a fine art, and could tell when the most perfect time for eating had come. Of the Pears named by "Y. A. H.," I am best acquainted with Beurré d'Amanlis, Louise Bonne of Jersey and Marie Louise. Of the three, the Louise Bonne has the widest range of quality; the other two are more regular and constant under good culture and treatment. The great point—and it is by no means an easy matter—is not to gather Pears until they are sufficiently ripe to pack the fruit full of the sweetest sap and most luscious flesh of the highest quality, without allowing them to mellow into sleepiness. But very special knowledge and patience are needed to place every dish of Pears (so far as possible) on the table in the most perfect condition. The lists of dates of ripening for our most popular Pears and other fruits have proved somewhat misleading. Not only every county, but every garden and every parish would need a special dictionary of dates if the latter are to approach any degree of trustworthiness; and then the changing seasons would so destroy local data as to render them untrustworthy. Hence it often happens that the ability to know the exact time to eat Pears and other fruit is a more difficult art than their culture, storing, keeping and marketing.—D. T. F.

CATERPILLARS ON FRUIT TREES.

The Board of Agriculture, in a pamphlet dealing with caterpillars on fruit trees, and which has just been issued, says:—

There are several moths whose wingless females crawl up the stems of Apple trees in the autumn and early spring and deposit eggs in the interstices of the rind of the twigs and branches From these eggs caterpillars are hatched in the spring, which eat the leafage and blossoms, and, in conditions favourable to their development, cause much injury to the fruit crop. Among these moths, the winter moth (Cheimatobia brumata) and the mottled umber, or great winter moth (Hybernia defoliaria), are the principal offenders. There are other moths of similar habits, as the scarce umber (Hybernia aurantiaria), the great brindled beauty (Phygalia pilosaria), the small brindled beauty (Nyssia hispidaria), and the belted beauty (Nyssia zonaria), whose caterpillars injure fruit trees; but these are not nearly so common as the winter moth and great winter moth. In the beginning of October the winter moths and the great winter moths come from chrysalids in the ground, under and near the Apple trees that were infested with caterpillars in the preceding spring, and the wingless females crawl up the trunks of the trees for the purpose of egg-laying. The eggs of the winter moth are very small, cylindrical, and at first of a light green colour, afterwards becoming red. They are placed in small groups in the chinks of the rind, and fastened there with a sticky substance. From 150 to 200 eggs are laid by one female. The great winter moth lays larger, rather rusty coloured, long eggs, and more in quantity (as many as 400), which are placed in lines, or small groups, according to circumstances. From the eggs the caterpillars come in the early spring and, as it appears, just as the buds begin to burst. The winter moth caterpillars are at first grey, with dark heads, and so small that it is difficult to see them. Later on they become greenish, with white stripes and brown heads, and are finally rather yellow. When full grown they are about three quarters of an inch long. They have three pairs of feet and move like other "looper" caterpillars, making loops with their bodies as they progress. They glue the leaves and blossoms together to form a shelter, and soon clear them off if the circumstances are suitable. When food fails, or when they are fully fed, they let themselves down to the ground by silken threads and bury themselves in it. The moths begin to appear in the first week in October, and may be seen throughout November, and even December if the weather is fairly mild. The caterpillar of the great winter moth is chestnut-brown in colour, with a tinge of yellow on the under part of the body. It is much larger than the winter moth caterpillar, being 1¼ inches in length. When the period of pupation arrives, the caterpillar descends to the ground and changes to a chrysalis just below the surface. In some seasons, especially in those when the progress of the leaves and blossoms is arrested by spells of cold weather, great mischief is caused by the caterpillars of these and other wingless months. Sometimes the trees are left as bare as in winter, and are, besides, seriously injured for another season. The caterpillars not only attack Apple trees, but also Plum, Damson, Filbert, and Cob Nut trees, and occasionally Currant and Gooseberry bushes that are set under Apple and Plum trees in fruit plantations.

Methods of Prevention.

It is very necessary to adopt methods of prevention against these insects. The first and most important of these is to prevent the passage of the wingless female moths up the trees in the autumn and winter months. This can be effected by putting sticky compositions round the stems to entrap the moths; or by placing an apparatus made of wood and tin, or other materials, such as stout varnished cardboard, to bar their progress. Fruit growers who have applied bands of sticky composition round fruit trees in a proper manner, and renewed them from time to time, have experienced great benefit from this practice. Cart grease made from fat or oils, and without tar, is recommended as the best and safest composition to use for banding fruit trees. It can be applied directly to the stems, but as constant greasing affects the bark, particularly of young trees, it is better to put it upon wide bands of tough, grease-proof paper, like that used by grocers, fastened round the trees with string or bass. When these paper bands are used for old trees the rough bark must be scraped away. Tar and some manufactured compositions have been found to injure the trees. If these are used they should be always spread upon bands of paper, and great care should be exercised in the selection and application of all compositions whose ingredients are unknown. Grease-banding must be commenced early in October, and renewed from time to time when the composition has become dry and hard. Bands made from old oilcake bags, or manure bags, smeared with sticky composition, may be used, but these must be fastened very closely to the trees, and frequently examined to see that the composition has not been absorbed. Hay bands have been employed for this purpose. There is, however, nothing so good as grease-proof paper. It will be necessary to keep the bands in good working order as long as moths are seen about. This will be quite up to Christmas, unless the weather is very frosty. In February or March, or as soon as frosty weather has gone, the wingless females of the other moths mentioned above come forth, and ascend the trees for the purpose of laying eggs upon them. These moths are not nearly so numerous as the winter moths, and it might not be necessary to keep the bands in working order for these alone, but it is desirable upon the breaking up of winter to note whether the male moths are flying about the trees in the dusk, and if they are seen in quantities to put the bands in working order. A guard is extensively used in the United States and Canada to prevent the canker worm (Anisopteryx pometaria), a moth of similar habits to those of the winter moth, from ascending fruit trees. It consists of a girdle of tin, fastened so as to slant 3 inches or 4 inches out from the trunk of the tree, held there by a circle of fine sacking or linen, and fixed by a cord, to which the sacking or linen is sewn. The tin is smeared inside all round with an offensive substance, applied with a small brush, which causes the insects to drop to the ground as soon as they come in contact with

it. In the United States a mixture of castor oil and paraffin is used. Soft soap used without water, and carbolic acid or paraffin would answer equally well, or cart grease and carbolic acid, or paraffin, could be applied. Another form of moth guard consists of a square box sunk some 4 inches in the ground round the tree, and so as to leave about 4 inches of space all round it, about 10 inches being above the surface. There is a zinc roof over the box, and under this there is a trough, in shape like the letter V, 2 inches deep, made of zinc. This is tacked on about 2 inches below the upper edge of the box and filled with paraffin oil. The moths get into the trough and are killed by the oil. To expedite the process of refilling the V-shaped trough with oil, and clearing it of the dead moths, and seeing that it is in order, it is arranged that the roof can be taken off by loosening one screw. This is a somewhat expensive guard, but it is said to be very effective. Upon some fruit farms, where banding is carried out, lighted lamps are also hung above tarred boards, placed near the fruit trees in order to attract and entrap the male moths, which in their flight sometimes carry the females up into the fruit trees. In the case of cultivated fruit land, many of the chrysalids might be destroyed by digging or hoeing the ground all round trees that were infested in the spring and by digging or hoeing in lime or gaslime. In grass orchards the grass should be cut off short and removed, or fed off by sheep close to trees that had been infested. The surface should be raked hard with long-toothed garden rakes, and beaten down with shovels to smash the chrysalids.

REMEDIES AGAINST THE CATERPILLARS.

Spraying trees infested with caterpillars has proved advantageous in many cases where this process has been carried out well and adopted as soon as the slightest signs of infestation appeared. Small Apple, Plum, Damson trees and fruit bushes can be easily sprayed by means of ordinary garden engines fitted with long lengths of hose and fine spray jets to distribute the solutions over every part of the foliage. Large old Apple trees are beyond the reach of ordinary garden engines; to spray these, hand hop washing machines would answer, and there are machines especially manufactured for this purpose, fitted with strong pumps, and made narrow so as to go in fruit plantations.

The solutions recommended for spraying fruit trees infested with the winter moth caterpillars are:—

1. The extract of 7 lbs. of quassia, obtained by boiling quassia chips in water, to 100 gallons of water and 6 lbs. of soft soap.
2. The extract of 5 lbs. of quassia chips to 100 gallons of water, with 5 lbs. of soft soap and 5 pints of paraffin.
3. The extract of 4 lbs. of quassia chips to 100 gallons of water, with 4 lbs. of soft soap and 4 pints of carbolic acid, Calvert's No. 5.
4. 6 lbs. of soft soap and 2 lbs of finely-ground hellebore and a quart of paraffin, boiled and well stirred. This is sufficient for 100 gallons of water.

Soft soap is dissolved in a tub with hot water. The quassia chips are boiled and put in a separate tub. Where paraffin is used it should be well stirred up or "churned up," as the Americans say, with boiling soap and water, before it is mixed with the cold water. Spraying must be commenced early, directly there are any signs of infestation, and as the hatching out of the caterpillars is not simultaneous, but may be extended over some days, the operations must be repeated when requisite. The solutions recommended above do not kill the caterpillars directly, but make their food and surroundings unpleasant and distasteful, so that they die of starvation or fall from the tree. In the United States and Canada, arsenical solutions are employed most extensively, and with remarkable effect, against the canker worm. They have not yet been adopted generally in this country on account of their poisonous properties, although, from some experiments made with them here, they have proved to be most efficacious. There are two of these arsenical compositions. One, known as Paris green, is most strongly recommended by American and Canadian entomologists. It costs from 10d. to 1s. per lb. It should be obtained in the form of paste, which is safer than powder, and used at the rate of 1 lb. to from 200 to 280 gallons of water, according to the age and conditions of the leafage. If it is used too strong the leaves will be burnt. The solution must be kept constantly stirred so that it may be maintained of an uniform strength. It is not advisable to spray with arsenical solutions when the trees are in blossom unless the attack is very severe; in this case the solution must be made weaker. And as the object is not to dislodge the caterpillars, but to poison their food, the arsenical solutions should be made to fall like gentle rain upon the leaves, fine spray jets being used for this purpose. The other arsenical compound is London purple, which should be used in the same proportions as Paris green and in a similar manner. It can be obtained in a fluid form and is as poisonous as Paris green. Live stock must not be put on Grass in orchards where arsenical compounds have been used until a considerable time has elapsed and rain has fallen. Such compounds must not be used where Gooseberries for early picking, and herbs and vegetables for early use are grown under the trees. Three or four days will elapse before the effect of the arsenical applications is apparent, and probably it will be necessary to repeat them in many cases. They can be put on with the same machines as those advised for the quassia, carbolic, and paraffin solutions. Spraying with Paris green, London purple, and other solutions prescribed for winter moth caterpillars would be also efficacious against the Apple blossom weevil (Anthonomus pomorum) and the Apple sucker (Psylla mali).



Gladiolus Lemoinei hybrids.

GARDEN FLORA.

PLATE 1042.

GLADIOLUS MRS. BEECHER AND G. BEN HUR.

(WITH A COLOURED PLATE.*)

THE two handsome Gladioli represented in the accompanying plate are varieties of the race called G. Childsi, and along with several others were sent us for trial by Mr. J. L. Childs, of New York. It will be seen at a glance they bear a strong resemblance to the fine kinds that M. Lemoine has distributed within the last eight years, and which he obtained by crossing G. Saundersi with some of the robust and hardy forms of the G. Lemoinei section. At about the same Herr Otto Froebel, of Zurich, made a somewhat similar cross, G. Saundersi and a G. gandavensis variety being the parents. M. Lemoine classed the varieties he secured under the name of G. Nanceianus, whilst the progeny of Herr Otto Froebel's cross came out under the name of G. Turicensis. Previous, however, to the work of these two noted hybridists, Herr Max Leichtlin had crossed G. Saundersi and a variety of G. gandavensis, disposing of the varieties he secured to a French firm. These passed from France into the hands of Messrs. Hallock, of New York, and when that firm gave up business, although this new race had been greatly improved and fine kinds selected and named, none had ever been sent out, so they were purchased by Mr. J. L. Childs, who gave his own name to the family. This clearly explains the likeness that is manifest in the varieties of G. Childsi and of G. Nanceianus. The G. Turicensis cross seems to have been less prolific in fine kinds, but quite a large number are now included in the other two families.

Those of M. Lemoine's raising came first into prominence in England, as he was awarded a first-class certificate for G. Nanceianus var. President Carnot at a meeting of the R.H.S. held on August 13, 1889. A coloured plate of two later kinds was also given in THE GARDEN of February 27, 1892. All who have grown the varieties of M. Lemoine's cross will find those of the G. Childsi section equally fine, free and robust. The distinct form, good constitution and other merits of G. Saundersi have passed into its progeny unimpaired, and as garden flowers we think these varieties better adapted to gardens generally than are the better-known hybrids of G. gandavensis, these latter being always somewhat uncertain. In a cold, adhesive soil the varieties that Mr. Childs sent us for trial did remarkably well. Both in wet and dry years they have given fine flower-

* Drawn for THE GARDEN by Mr. A. F. Hayward at Gravetye Manor, Sussex. Lithographed and printed by Messrs. Joseph Mansell, Limited.



GLADIOLUS Mrs BEECHER.

. G. BEN HUR.

spikes and have increased at the roots as well, and we noticed most of them produced the little bulbils or spawn freely, so that on favourable soil they might be quickly increased and the best kinds grown to a large extent, as they certainly deserve to be. Although the spikes of these kinds do not have the great number of blossoms expanded at one time as are seen in many of the modern G. gandavensis varieties, what they lack in numbers they make up in size, the individual blooms of some sorts being nearly 6 inches across, fine bold flowers that are not in the least degree coarse, having that variability of outline, with pretty curves and reflexing of the tips of the petals, so characteristic of G. Saundersi. The quaint and marbled spottings in harmonious hues, so charming in this parent, have likewise been transmitted to its offspring. Two very fine kinds are those here shown, Mrs. Beecher being a brilliant crimson-scarlet, varied only by a few white markings on one segment. Ben Hur was perhaps the finest of them all as seen in the garden, and the spike figured rather falls short of the full beauty of the kind, its flowers being of great breadth of petal and strikingly beautiful in colour, a soft salmon-pink, flushed with darker colour in the throat. W. Falconer is another superb variety, having bold salmon-pink flowers, feathered with cerise-red. Henry Gilman, too, gave some tall and brilliantly effective spikes, its flowers being rich red, with a white throat and a narrow white line running down the centre of each petal.

The Week's Work.

KITCHEN GARDEN.

Broad Beans.—It is not everyone that has glass for raising and hardening off Broad Beans in spring. For those who have not and yet wish for a few extra early dishes, the best plan is to sow now on a warm border, or well-drained open quarter well exposed to the sun. More care is needed than with spring sowings, the reason being obvious. Draw a good sized drill and half fill it with sweet loamy soil to which a little leaf-mould has been added. Let this be made firm and the Beans be sown rather thickly, as it must be remembered that mice are as troublesome amongst Beans as amongst Peas during the winter months. If sown thickly there will usually be enough in spring to fill all blanks and to make an additional row or two if desired. Cover with an inch of the same light loamy compost and finally with the ordinary soil. Do not afterwards leave them to take care of themselves, or in spite of thick sowings mice or rats may take every Bean in a few days. I do not advise the use of ordinary spit manure at this season, as the seed often rots if it comes into contact with it. If the ground is considered too poor without assistance, dig in some spent Mushroom manure. In regard to sorts for autumn sowings, none is better or earlier than the old Mazagan, but I like to sow a row or rows of Green Windsor also. This is very hardy, not easily affected by rot, and will even if the former variety succeeds form a good succession. I have known the Seville Longpod to be sown also with good results.

Salading.—In many establishments salads will now be in great demand, and it behoves gardeners to take all the possible care of any Lettuces of the Cabbage section and surplus Endive left on the borders when the pits and frames were stocked, as it rarely happens that there is any too much left in those structures in March and April, especially after an indifferent winter. Those who possess a Peach case or orchard house may well utilise all vacant spaces in them by laying in both the Endive and Lettuce. If possible, give them a position pretty close to the front lights, so that by a free and constant circulation of fresh air, damp may be warded off. It is very easy to blanch them by covering the plants either individually with flower-pots where not laid in too thickly, or by laying garden mats or even sheets of brown paper over them. Of course, the plants so housed must be used first, as at the approach of spring tree dressing and border surfacings will necessitate a complete clearance of everything from the house. When lifting secure as good a ball of soil as possible, as this makes all the difference. In regard to watering, it is best to soak the balls to settle the new soil round them after a few dozen have been laid in, as then the foliage can be held on one side and the water prevented from going into the centres. Many force or rather blanch Endive in the Mushroom house, and although this way is very convenient, the leaves are never so crisp as when kept in a comparatively cool place. Where Chicory is in favour a batch of roots may now be introduced into the Mushroom house, Dandelion being served in the same way. If these various subjects are used alternately they make a pleasing change in the salad bowl. All younger batches of the foregoing which are to be left in the open borders all the winter must not be neglected, or severe frost after a soaking rain may work irreparable mischief. Cover up nursery beds which are surrounded with boards furnished with cross rails with mats or canvas every evening when the weather looks at all threatening. Nothing surpasses dry leaves for protecting rows of the Brown Cos under south or west walls, this being proved by the green, fresh condition of those plants after a severe time which have been covered by mere accident by leaves drifted by the wind, uncovered ones by their side often being weakened or destroyed. The principal point to be observed in the management of all kinds of salads in the frameyard at this particular date is careful ventilation. It is always best to keep the lights continually tilted over the Endive frames in order to preserve the leaves in a dry state, as if near the glass 10° or 12° of frost will often damage them if wet. October planted Lettuce and Cauliflower, also Cabbages in frames, will now be all the better for a stir with a small rake, a sprinkling of lime and soot or soot and wood ashes also being necessary during the prevalence of such exceptionally mild weather, as slugs are both numerous and active. Remove all decaying leaves and avoid excessive coverings, or, indeed, coverings at all, unless the weather actually demands it.

Sprouting early Potatoes.—Where it is intended to grow a few Potatoes in pots it is now high time the tubers were placed in comfortable quarters to sprout. First of all place a small quantity of leaf-mould in the bottom, then stand each tuber on end with the most prominent eyes upwards, and set the box in an early Peach house or vinery in a heat ranging from 45° to 50° during darkness. Moisten gently occasionally with the syringe, and as soon as the strongest sprouts can be detected remove all but the two most robust. In about three weeks tubers of Sharpe's Victor will be far enough advanced for planting in 10-inch pots. Under this treatment nice-sized Potatoes may be had for the dining-room in the early part of March. Some prefer boxes, and in such cases holes sufficiently large to allow of the escape of superfluous water must be bored in the bottoms. Through inattention in this matter the finer portions of the compost often wash down through the drainage, stopping the apertures and producing sourness in the soil. Where a variety of sorts is wished for, Mona's Pride and Ringleader may be added to the above, as if the haulm should grow too tall, pinching may be practised. In purchasing seed tubers of Sharpe's Victor care must be exercised, as it is said that a spurious variety is being sold under that name. Owing to continued mildness, many sorts of early and second early Potatoes will be liable to grow unduly, especially where stored in cellars or root-sheds. They must be looked over now and then and all early sprouts removed.

Peas in pots.—By the time these notes appear December will be upon us, and where pot Peas are grown, a sowing should be made of such sorts as William Hurst, English Wonder, American Wonder, and Chelsea Gem. Use pots 10 inches in diameter and a fairly rich loamy soil, adding about a sixth part of well-decomposed manure. This quantity had better not be exceeded, or an unsatisfactory growth may follow, and it is an easy matter to apply artificial stimulants later on. Allow sufficient space at the top of the pots for earthing up when growth is 3 inches or 4 inches high, drain the pots well, giving them a light and airy position near the roof glass, and, if possible, not far from the ventilators. A house having a night temperature of 45° will suit them well for the present, and very little water will be required till growth appears

Preparing for hotbeds.—Where early Potatoes and Carrots are expected, say in April, no time must be lost in getting together such material as leaves, stable litter, and any loose littery garbage from the rubbish heap, as it is quite astonishing what a bulk is required to build up a good-sized hotbed capable of accommodating three or four two-light frames. The beds will not be made up till Christmas, but, as a rule, leaves and manure are only forthcoming piecemeal, and plenty of time should be allowed for accumulation. It is advisable also, where plenty of shed room exists, to move under cover a sufficient quantity of suitable soil for planting and sowing these early forced vegetables in, as one never knows what the weather may be like when the time for that work arrives. J. C.

HARDY FRUITS.

Damsons and Bullaces.—These are well worth special mention where fruit is required in variety and quantity. Damsons are most useful in many ways, and may be grown where Plums will not thrive so well—for instance, in hedgerows or as dividing trees or nurses for choicer fruits. In my opinion the more these trees are exposed, the better they crop, and when grown in hedges the wood gets better ripened. In my younger days I had much experience of these fruits in the above form, and have never seen so good results with what may be termed trees grown in crowded gardens. The trees planted as advised will need little pruning or attention after the first season or two, the principal being staking to protect from wind. Of course, in private gardens variety in the fruits may not be required, but there is considerable gain in planting several varieties, as then the crop does not come in all at once. Again, some Damsons are better for cooking than others, and though the newer introductions are larger, they are not so free cropping. The old variety, or English Damson, is much grown in the midlands and is most prolific. The Cluster or Crittenden, a roundish, oval fruit, is excellent, both as regards cropping and quality, and also makes a good bush or pyramid tree; it also makes a fine standard, and grows freely when worked or on its own roots. The King of the Damsons is a large fruit, sweet and earlier than the above. It does well grown as a bush, and fruits freely in a young state. The Prune is much grown in the north and is of excellent quality. The Bullaces are valuable, as they give fruit after the Damsons are over. A tree or two should be in all gardens of any size. There are not many varieties, but the best are the new Large Bullace, which ripens its fruit at the end of October and is larger than the old variety, Shepherd's Bullace, a large green fruit, and the White Bullace, noted for its good qualities.

Quinces and Medlars.—These fruits are not much planted, and if space is limited they do well as ornamental trees on lawns or in shrubberies if not too much crowded. The Quince succeeds best in a moist situation. There is no fruit equal to the Quince for making into preserves. Quince marmalade is also excellent, and the fruit in a raw state is an excellent addition to Apple tarts, and keeps a long time if allowed to ripen thoroughly before gathering. There are three varieties—the Apple-shaped, a roundish fruit, quite yellow when

ripe and a sure cropper; the Pear-shaped, with green-coloured fruits, with softer flesh, later, and a little larger than the above; and the Portugal, a large fruit, late, and much covered with a woolly substance. This is a grand tree for effect, but not so productive as those named above.

Medlars come under the same heading as Quinces, as few are required. By some persons they are much liked, and form a useful addition to the winter dessert. The tree, like the Quince, is very ornamental, but will not grow in swamps. It likes a strong loam and does best in standard form. Many do not care for the fruits, as they require care in gathering and storing. If stored too early they are woolly and worthless for dessert. They require cool storage, and should be allowed to remain as late as possible on the trees. The Nottingham is the best flavoured and the tree is a dwarf grower. The Dutch is superior in size, the tree spreading and the fruits large, but not equal to the first-named in quality. The Royal, a newer variety, is good and a very free bearer, fruits large and superior to the Dutch. The trees should be little pruned, merely thinning out crowded shoots to admit light and air to the centre of the trees.

Mulberries.—I have a great regard for the Mulberry, as it has a noble appearance when aged and fruits so profusely. Little cutting or pruning is required, and the fruits in the early autumn are much liked for dessert. They also make a splendid preserve. I never knew trees miss a crop. There are only two varieties, the White and Black; both bear freely. I prefer the Black for dessert; the fruits are excellent when the trees are in an open, sunny position. The usual form of growth is as a standard, though the trees grow well in any form. Mulberries should be given good loamy soil, and in a young state require care in staking, as the wood is very brittle. This latter is a serious drawback to older trees, as they frequently lose large branches. Unlike many fruits, the old stems, if well banked up with soil, soon make new roots. When planting it is well to protect from cattle, the latter being fond of the young wood.

Nuts and Filberts.—The leaves having fallen, these trees may with advantage receive attention. If at all crowded the trees should now be thinned in the centres, all sucker growths cut clean away, and the trees shaped if grown in the cultivated portion of the garden. These trees well repay good culture, and at times are much neglected. In places where these trees are much grown they are kept well thinned—in fact, grown in rows like huge Currant bushes and pruned annually. In planting it is advisable to get young trees from layers. They are more reliable than seedlings and soon fruit. The varieties are numerous, the best for garden culture being the Kentish Cob, the largest and one of the most prolific and a certain bearer; Webb's Prize Cob, a very fine type of Kentish Cob, the nuts being produced in large clusters; the Red Filbert, one of the best for flavour; the Kent Filbert; the Cosford, a smaller kind, but valuable when planted with others, as it produces a great quantity of male catkins.

Figs.—Last winter having severely crippled many trees, more than ordinary care will have to be taken to preserve the new wood, as this will be soft. In a previous calendar I pointed out the importance of getting only a few strong shoots, and these as firm as possible. In no case do I advise coddling, as by free exposure as long as possible the wood will be firmer. With December close at hand, however, protection must not be delayed. The shoots should be unfastened from the wall, then tied together, and a good covering of dry Bracken placed round them. Failing the above, oat straw or loose litter may be used. Secure to the walls and cover with a mat, this giving a neat finish to the trees and preventing them blowing about. Very old trees that are not covered are often fruitless because the points of the new wood are killed. Young trees or those with new wood from the base should have a good thickness of litter to protect the stems and surface roots.

Planting fruit trees.—With copious rains the soil is in fine condition for planting. The work should be proceeded with without delay, as trees put in now will give less trouble if a dry summer follows. In heavy land it is advisable to add additional materials to lighten the soil, and such aids may be prepared in the way of burning all kinds of garden refuse, collecting road scrapings where obtainable, and any old mortar or brick rubble. In light soils the addition of clay, loamy turf, or old Melon beds will greatly assist the fruit trees to make better wood and remain healthy for years without recourse to root-pruning. In no case plant deeply; the collars of the trees should be kept above the level, as with mulchings and soil given at intervals the trees will get too deep. Plant firmly, in dry weather if possible, and do not expose the roots to drying winds. G. Wythes.

NOTES ON PLUMS.

The following notes on Plums which we are enabled to publish through the kindness of our correspondents will doubtless prove interesting to our readers. They are from all parts of the United Kingdom. The following are the questions which we submitted:—

1. *The value of the Plum as an orchard tree, and how far its culture deserves extension, and in what soils?*
2. *Your opinion as to the value of new Plums, including those of Japanese, American, or European origin?*
3. *The best flavoured Plums?*

The Plum is largely grown as an orchard tree in this neighbourhood, but the varieties are poor, with the exception of Victoria and Belle de Louvain. The market growers depend upon Orleans, and what is known as bastard Green Gages. The latter are the result of taking suckers from other trees and growing them on without grafting or budding. They crop freely and the fruit fetches a fair price, but the quality is exceedingly poor. Plums succeed best in sandy loam overlying clay, but at some depth from the surface. When the crop is a very heavy one prices are low, and the fruit hardly pays for the picking. Belle de Louvain, Pond's Seedling, Jefferson, Bryanston Green Gage, Diamond, Gisborne's, Prince of Wales, and Monarch are a few deserving varieties. Jefferson is, in my opinion, the finest of all Plums for jam-making, superior even to Green Gage. As a cropper it is unrivalled, either in the open or against a wall. Washington is another variety that succeeds here admirably against an east wall. Against a south wall one large tree stood for ten years and never bore a crop, in spite of judicious root-pruning. It gave a yearly crop of blossom, the tree all the while being the picture of health. From trees on the east wall I get yearly crops of very fine fruit, and of excellent flavour. Green Gage, Washington, Coe's Golden Drop, Jefferson, Kirke's, and Transparent Gage are all good-flavoured varieties. — E. Molyneux, *Swanmore Park, Bishop's Waltham.*

The Plum is no doubt one of our most useful fruits, and should be extensively cultivated in suitable districts. It is not largely grown in the immediate neighbourhood, although most cottage and farm gardens have some trees, generally of the commoner and hardier sorts, such as Victoria, Winesour, Orleans, Bullace, and Damsons. Gages and other choicer sorts are also sometimes met with. In this garden Plums do not do so well as most other fruit. I attribute this to the soil being on the sandstone rock, and consequently deficient in calcareous material. No doubt it could without much trouble be made suitable, and when time permits I intend taking up Plum culture more fully. The most suitable soil for the Plum is that on calcareous rocks. It likes a thin soil, and should be grown on the hill slopes to the south, and have shelter from the north and east. In these suitations it fruits most abundantly. A gentleman who cultivates this fruit largely not far from me says that half standards or bush form of tree planted rather thickly succeed the best. Victoria is one of the hardiest and greatest bearers. Early Prolific also does well, as well as Orleans, Jefferson, Mitchelson's, Pond's Seedling, and Damsons of sorts. I cannot say much as to new Plums, but those of European origin seem to do best in this district. Jefferson and Washington, of American origin, are good Plums, but require to be grown on walls. I consider some of the best-flavoured Plums are the Gages, Jefferson, Coe's Golden Drop, and Washington.—J. S. Upex, *Wiggenthorpe, Yorks.*

As an orchard tree, certain Plums are valuable when good soil can be had. They will pay well for their cultivation around here. Where they do best is on a good, retentive loam, where no water lodges. I grow most of the Green Gage class, as they are what my employer most cares for. I include Denniston's Superb. MacLaughlin's I consider one of the best flavoured Plums grown, equal to any Green Gage. For flavour, Green Gage, Transparent Gage, July Green Gage, Late Green Gage, Bryanston Green Gage, Brahy's Green Gage, with MacLaughlin's and Denniston's Superb are what are most sought after here, although I grow several other sorts; but as long as I can supply the above they are not inquired for. In the orchards around here Wine sour and Victoria are grown a good deal.—A. Henderson, *Thoresby.*

When one sees the market glutted with Plums most seasons, and these such a perishable fruit, it does not seem wise to extend their culture as an orchard fruit, though perhaps their season might be extended by having some earlier. Plums do well in many soils, some very good fruit being grown here in a poor, chalky soil. New sorts I have no experience of, and the best flavoured undoubtedly belong to the Gage family.—J. Hill, *Babraham Gardens, Cambridge.*

I consider the Plum the most valuable fruit we have for orchard culture, and when the soil and situation are suitable it deserves extension. Light soils I do not consider suitable for Plum growing. A strong or chalky loam is, in my opinion, the best.—J. Smith, *Mentmore, Bucks.*

Plums would, in my opinion, do better and be much more remunerative in many orchards than the Apple trees one usually sees in a half-decayed condition, occupying much space to no purpose. Many soils that the Apple refuses to do well in would grow Plums to perfection. Especially is this so in this locality. Cox's Emperor, Black Diamond, Pond's Seedling, Victoria, and various other kinds are all capital sorts, and would do well in most orchards. Among the best-flavoured kinds are Angelina Burdett, Jefferson, Kirke's, Reine Claude de Bavay, and Transparent Gage.—W. Nash, *Badminton Gardens, Chippenham.*

The only Plum I am acquainted with deserving of orchard culture in this neighbourhood is Victoria. It is most fruitful on light soils, but I have had it bear abundant crops on our heavy clay. The best-flavoured Plums here are Green Gage, Jefferson, Kirke's, and Victoria, the last sometimes very good on walls.—J. Short, *Hummersknott, Darlington.*

As to the value of the Plum as an orchard tree opinions differ. In certain seasons good prices are realised. In some seasons the whole prospect of the season is shattered by frost when the trees are in full bloom, while in another season the Plum crop is so abundant that the markets are glutted, and the fruit does not pay for gathering. I have known instances in Worcestershire where the Plums have been allowed to drop off the trees, and pigs have been turned into the orchards to eat them up. This neighbourhood is not well adapted for the growth of the Plum, the soil being too light and sandy and overdrained. I get good crops, but not size. As to sorts, Victoria is the best orchard tree. Prince of Wales, Autumn Compôte, Rivers' Early, Kirke's, Diamond, Cox's Emperor, Pond's Seedling, Prince Englebert, Jefferson, and Green

Gage are amongst the kinds that succeed best with me. Jefferson and Green Gage are the best flavoured. The best soil for the Plum is undoubtedly light to heavy loam, resting upon a gravel or limestone subsoil.—G. Bloxham, *Brickhill Manor, Bletchley.*

I have some Plums growing here in a stiff clayey soil as orchard trees, such as Autumn Compôte, Bryanston Gage, Coe's Golden Drop, Coe's Late Red, Damsons of sorts, Diamond, Kirke's, Early Favourite, Jefferson, Large Black Imperial, Mitchelson's, Orleans, Pond's Seedling, Victoria, Washington, Winesour, &c., and they do very well. I find the best Plums for flavour to be the Gages of sorts, Jefferson, Reine Claude de Bavay, Transparent, and Ickworth Impératrice. These are hard to beat, especially when grown on a wall.—Thomas Shingles, *Tortworth, Falfield, Gloucestershire.*

Orchids.

DENDROBIUM PHALÆNOPSIS SCHRŒDERIANUM.

The introduction in quantity of this grand Orchid should mark quite an era in Orchid growing, no other known kind being so attractive during the winter months. The beautiful racemes, so richly coloured and withal so refined and graceful, have a charm peculiarly their own, and the more one sees of it the greater the desire for it seems to be. But with this distinctness there is sufficient variety to arouse interest in the opening flowers, not only in colour, but to a certain extent in the shape also. The lip varies considerably in this latter particular, some forms having the front lobe narrowing almost to a point, while in others it is very full and rounded, the latter being much preferable. The blossoms are produced with the greatest freedom, the old, dry-looking stems contributing their share to the display in addition to the spikes produced from the tops of the young growths; indeed, it is not unusual for the plants when newly imported to push flower-spikes before any other signs of life are apparent, and though this would appear to be detrimental to them, I could never see any difference in the after-behaviour of these plants from that of those that did not produce them, though perhaps they may not start quite so quickly. This tardiness in starting is, however, a characteristic of the species, and months will often elapse before any roots or growths appear. The basal eyes would seem to be easily injured and rendered blind by the drying consequent upon importation, or perhaps by the cold to which the plants are exposed, and the plant has to form others before an outlet for its energies is found. As this is as often as not some distance up the stem, it is better not to place the plants in pots or other receptacles until they do start, otherwise the roots when produced will be far out of the reach of the compost. In the case of newly-imported Dendrobiums I prefer laying them flat on a moist stage to hanging them up in the house, and for this kind I believe there is no better plan than laying the plants upon Sphagnum Moss kept regularly moist, without being saturated. As mentioned above, the plants will probably be a long time in starting, but when once they begin to grow freely, no time should be lost in getting them in place. In choosing their home, it must be kept in mind that the roots, though freely produced, are not of an ambitious nature and do not, as a rule, run very far from the stem, but prefer to grow closely matted together, twining around and interlacing each other. This being so, it is evident that a large pot holding a good deal of compost is not only unnecessary, but really harmful, the roots not being able to penetrate it and gain a hold on the sides of the pots. The smaller their circumference then, provided the plants can be got into it, the better, and for the same reason the layer of compost must only be thin, and should contain abundance of small crocks or similar material to prevent closeness. If necessary, to bring the base of the young growths into contact with the surface of the compost, the stems must be cut through an inch or two below them and brought down, or they may in some cases be bent sufficiently to answer the same purpose. Place them to form as neat and well-balanced a plant as possible, and then fill up with the compost, making the latter firm to prevent the stems rocking about, and using a few stakes if these seem to be needed. Care when potting must be taken that the young shoots are not broken off, for they are very brittle. They are also very liable to damp, so attention is needed in watering until they become strong and are rooting freely. This Dendrobium should be grown in the warmest house all the year round, and rested simply by partially withholding the water supply. The typical D. Phalænopsis was introduced from North Australia in 1880, the present variety, as is well known, having been imported by Messrs. Sander and Co. about four years ago from New Guinea. R.

Odontoglossum Oerstedi.—When well grown this is a charming Orchid, the little flowers having a novel and distinct appearance at once chaste and effective. It requires careful treatment to do it well, but this it well repays. The best of all modes would undoubtedly be on lightly dressed blocks of cork or teak, but this necessitates so much attention to watering, that we have to fall back on pots or pans. The latter are preferable, and they should be broad and shallow, suspended as close to the glass as possible. Fill these nearly to the rim with crocks, raising a little towards the centre, and wire the little plants down firmly upon a cushion of Moss and a very little of the best peat. With the dibber press this well about the bases of the pseudo-bulbs, so that they may root easily into it and keep steady, trimming off all ragged and protruding ends. A full supply of water is needed all the year round, but after repotting, care is, of course, necessary. O. Oerstedi, a native of Costa Rica, was introduced in 1872, and the flowers occur on short racemes of two or three, each being about 1¼ inches across, pure white, except a yellow stain on the lip. The variety majus has larger flowers than the type.

Odontoglossum Insleayi splendens.—This differs from the type in bearing larger flowers, which are more richly coloured, the better forms ranking amongst the most brilliant of the O. grande section. Many plants produce four, or even five, flowers upon the spike, each being nearly 4½ inches across. The sepals and petals are of a rich tint of brown, margined and heavily tipped with yellow. The lip is broad and clear golden yellow in colour, while around the front and side lobes is a distinct margin of large crimson spots. There is also a form of this with clear golden yellow flowers, with no markings save a few light splashes of brown about the crest and the marginal spots of crimson on the lip. All the varieties are natives of Mexico, and are better for a little more heat than the crispum and triumphans section.

Epidendrum polybulbon.—A well-grown plant of this tiny Orchid is very attractive when covered with the pretty little purple and white flowers. It would appear to be a very widely distributed plant in Jamaica, Mexico, and various other parts of America. The plant is of a creeping habit, bearing small two-leaved pseudo-bulbs at intervals upon a wiry rhizome. The habit of the plant at once suggests the kind of rooting medium and receptacle required, flat pans with only a thin layer of peat and Moss answering admirably. The little bulbs should be pegged down to admit of their rooting into the compost freely, and when they reach the edge of the pan they may be easily bent back, thus keeping the specimen well furnished with flowering growths. A little fresh compost will be required annually, and any decayed and worn-out pseudo-bulbs must be removed at the time this is applied. If the pans are well drained and the compost in good order, frequent supplies of water will be needed while the growth is being made, and at this time the plants may be in the Cattleya house. When at rest less water will be required, and the plants placed in any house that does not fall below 50°. It flowers during late autumn.

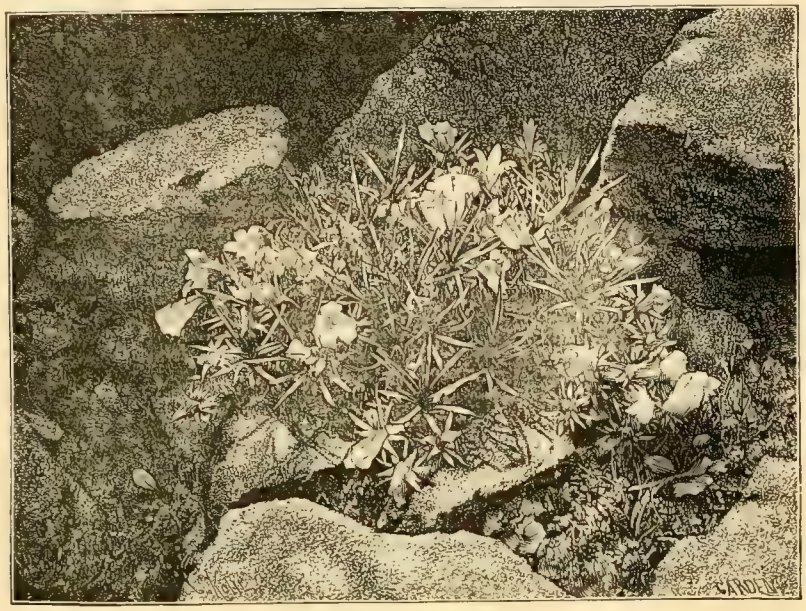
Cypripedium Schlimi.—This little gem is hardly ever without a few flowers open, bloom-spikes being produced upon every growth. The flowers are too well known, perhaps, to need a detailed description, but they are always welcome on account of their soft and delicate colouring. C. Schlimi is a native of New Grenada, and was discovered at a great elevation by the collector whose name it bears about thirty years ago. It is said to be found on the banks of streams and other very moist and swampy places, where it is impossible for the roots to be dry for any length of time, and that it delights in this ample moisture at the root is proved by its thriving only under these conditions in our Orchid houses. The best compost for it is equal parts of peat fibre, loam, and Sphagnum Moss, with plenty of small crocks, and in potting, the surface of this should be kept below the rim, as in ordinary potting. Plants that are out of condition from any cause should have the flower-spikes removed as they appear, and if in a bad state, all the roots must be shaken clear of the compost and well washed in tepid soft water before being again repotted. It thrives best in a shady corner of the coolest house when well established, but newly-imported plants require more heat.

Miltonia Moreliana purpurea.—Under this name I have seen a very deeply coloured and large form of this most desirable species, the flower measuring over 3 inches across, and of a deep purple with lighter veins. This is one of the most useful of Orchids at this season, well-flowered plants making a very fine display and lasting a long time in beauty, almost rivalling the Cypripediums in this respect. Though strictly speaking a variety only of M. spectabilis, this is amply distinct as a garden Orchid.

CATTLEYA DOLOSA.

The distinct appearance of this pretty Cattleya should ensure for it a greater share of popularity than it obtains at present. Were there a demand for it, plants would probably be forthcoming. I remember some few years ago assisting in blocking a number of plants of this species that were newly imported, and although these plants rooted and grew well, there was never the size of pseudo-bulb or of flower that I have since seen on plants grown in pots in the usual way. Block treatment, though apparently a natural mode of culture, is too poor for Cattleyas, though with the species in question, pieces of Tree Fern stem as advised by a correspondent in The Garden recently for C. superba would probably make a very suitable medium. This is not, however, always obtainable, and the pot or basket has to be fallen back upon. These should not be large enough to hold a great body of compost, as the roots, though freely produced, are not very robust. Good peat with all earthy and sandy particles beaten out and nice fresh Sphagnum should be mixed in equal proportions and the plants placed in position. The crocks for the drainage may be brought neatly to the rim, covering the bases of some of the old back pseudo-bulbs if need be and raising in the centre to a convex pile. If the plants are newly imported this will suffice for the first season, but established plants will need a thin layer of the mixture mentioned above, working it in carefully about the roots with the dibber and pressing it moderately firm. Trim off all ragged ends neatly

and return the plants to the house. C. dolosa is an autumn-blooming species flowering on the apex of the newly-made pseudo-bulbs, and therefore it requires to be started in spring and grown in a good light all the summer in order to produce a well consolidated and ripened growth. After flowering, no difficulty will be found in keeping



Edraianthus Pumilio.

the plants at rest during the winter, at which season only enough water to keep the pseudo-bulbs from shrivelling must be given. The flowers, each about 4½ inches across, are produced either singly or in pairs. The colour varies a little, more especially on the lip. The petals and sepals are usually of a soft magenta or rosy lilac, the lip rather lighter with a white and yellow throat and a broad marginal band of purple in front. In shape the flowers resemble those of C. Walkeriana, but the segments are fuller and more reflexed. C. dolosa is found in various parts of South America, and was first discovered in Minas Geraes, whence it was sent to this country in 1872.

H.

Cattleya gigas Sanderiana.—I was rather surprised to see this exhibited at a Chrysanthemum show last week, as it usually flowers rather later than the type. The blossoms are large, of a pretty lilac-rose tint, and the lip is very deeply coloured, with a large blotch of orange-yellow in the throat. It is one of the very best forms of this popular species.—R.

Maxillaria picta.—This quaint old species is now in flower and is remarkable, not on account of the individual beauty of the flowers, but for the number produced from a single pseudo-bulb. On account of the incurved sepals and petals the flowers individually only measure about 1½ inches across. They are orange-yellow with many purple and brown spots. This species thrives well in pots in a mixture consisting of equal parts of peat fibre, loam, and chopped Sphagnum, and seldom gets out of health if kept in a shady, moist corner of the Odontoglossum house. As mentioned above, it is an old species, having been introduced as far back as 1832 from the Organ Mountains, in Brazil.

Cypripedium Rothschildianum.—This is a magnificent and very showy species, apparently of the same class as the remarkable C. Stonei. The growth is very vigorous, the leaves being each upwards of 2 feet in length, broad and deep green. The blossoms, each about 8 inches across, are produced on erect scapes, about two or three on each. The dorsal sepal is large and of a dull yellow ground colour, this being overlaid with dark purple stripes, the colour fading towards the margin. The petals are very long, somewhat narrow, yellow, with wavy edges. These are thickly spotted over their entire length and have several dark lines running through them. The pouch is light brown, with shading of orange-red about the opening. C. Rothschildianum requires plenty of heat and moisture to the roots, thriving well in a shady position on the stage in the East India house. Like all of this section, it shows a disposition to damping at the base of the leaves when newly imported, but when established grows freely and well. The ordinary compost as advised for Cypripediums suits it well, and the cultural routine will be similar. It is a native of New Guinea, and is quite an acquisition to this fine genus. It was introduced in 1888.

Three useful Cypripediums.—Undoubtedly three of the most useful Cypripediums flowering at this season of the year are insigne, Harrisi, and Spicerianum. These were all exhibited in fine form at the Lincoln show by Mr. Wipf, of Hartsholm Hall. Their value is greatly enhanced by their succeeding in a comparatively low temperature, and by the fact that they will stand removal to the drawing-room or entrance hall without suffering, provided they are not allowed to remain there too long and are supplied with a moderate quantity of water only. The foliage of Spicerianum is very much like that of the old insigne, and very small plants rapidly increase in size, it being a very free grower. It is astonishing how many types there are of Cypripedium insigne, and I am of opinion that different soils influence the markings and shades of the blooms very much. I find insigne responds quickly when growing to moderate doses of liquid manure.—J. C.

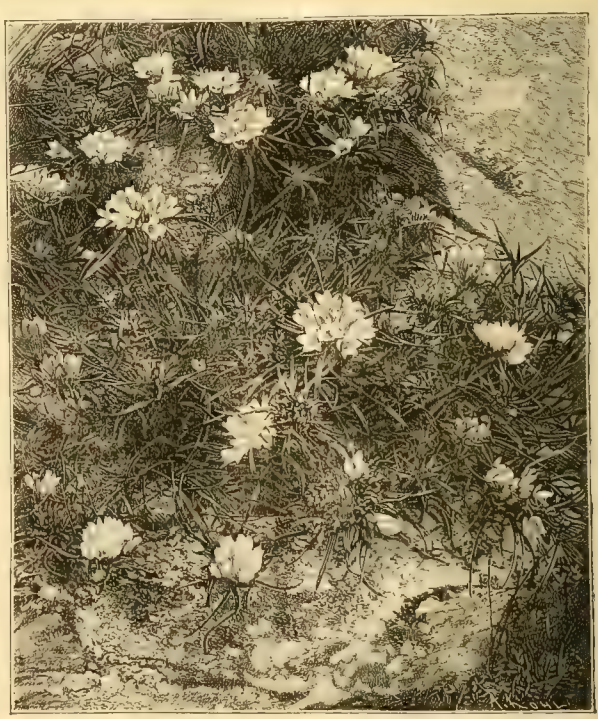
Cypripedium Tryanowskyanum.—From Mr. Hugh J. Hunter comes a flower of this hybrid. It is as large as a good C. insigne, which in shape and in the colour of the dorsal sepal it somewhat resembles. The petals are, however, much longer and prettily waved, of a glossy rich purplish rose, ornamented on the upper edges with short black hairs and having deeper longitudinal lines. The pouch is similar in colour to the petals, while in shape it is rather more pointed than C. insigne. It is a very pretty flower, and by the appearance of the scape it should be a healthy and a vigorous grower.

FLOWER GARDEN.

EDRAIANTHUS.

IT is difficult to understand why to so small and so distinct a genus as the Edraianthus should be given so many different names. The genus contains some half dozen varieties that are most excellent rock plants, and there can be no doubt that these are allied to Campanula and to Wahlenbergia. But as most Campanulas and Wahlenbergias are so entirely different in appearance to these species of Edraianthus, why not retain De Candolle's good old name of Edraianthus?

The best varieties for the rock garden are Edraianthus dalmaticus, E. graminifolius, E. dinaricus, E. Kitaibeli, E. Pumilio, and E. serpyllifolius. All these are very pretty rock plants, which have been most successfully cultivated in many gardens, especially within recent years, but their names have been sadly neglected, and there is not a plant amongst the varieties mentioned which is not also known under quite a number of other names. Here is an example: Edraianthus dalmaticus (A. de C.), Edraianthus caricinus (Schott.), Wahlenbergia dalmatica, Edraianthus caudatus (Reichenbach), Edraianthus tenuifolius, Wahlenbergia tenuifolia. Just fancy half a dozen names for one plant! A judicious thinning out of the names is surely very desirable, and the sweeping away of the useless synonyms would be hailed as a boon and a blessing by gardeners and amateurs



Edraianthus graminifolius and E. dalmaticus in the rock garden at Abbotsbury, Newton Abbot. Engraved for THE GARDEN *from a photograph sent by Mr. F. W. Meyer.*

alike. But every one of these names is used in various catalogues of hardy plants, and I am not at all certain whether two more should not be added to the list, viz., Edraianthus graminifolius and Wahlenbergia graminifolia. I presume De Candolle must have found sufficient distinction from a botanist's point of view to justify the retention of different names for Edraianthus dalmaticus and Edraianthus graminifolius, but there is practically no difference between the two, or, if a difference exists, it is so trifling as to be invisible as far as flowers and foliage are concerned. Possibly there may be a difference in the seed which has escaped my notice. The accompanying engraving, fig. 1 (group of Edraianthus dalmaticus and E. graminifolius), will further illustrate the similarity of these "two" varieties. The group represented in the engraving was planted by me about two years ago in a large rock garden at Newton Abbot, and consists of five plants, two of them being Edraianthus dalmaticus and the other three Edraianthus graminifolius; to tell one from the other except by the label is impossible.

Having been very successful with Edraianthi, I will briefly state my experience in cultivating them. My remarks on this subject refer to the various species collectively as a genus, and not to any individual variety. According to my experience none of the varieties succeed well if planted on flat, more or less level ground, but if planted into an upright or abruptly sloping fissure, with the roots in a horizontal, instead of a vertical, position, success is certain, provided the work is properly carried out and the plants receive an abundance of sunshine. There are of course fast-growing and slow-growing varieties, but, with the exception of planting the dwarfest kinds closer together, I make no difference in the treatment. As the plants in the little group here illustrated (fig. 1) are in the most flourishing condition, a short account of the manner in which they were planted may prove useful to others.

The rock, which is facing south-east, was composed of pieces of limestone so arranged as to leave between them long, almost perpendicular, crevices 2 inches or 3 inches wide, and from 2 feet to 2½ feet in depth. These crevices were filled with plenty of broken stones for drainage, and before filling in the soil the lowest visible or outward part of a crevice was closed up by a small wedge-shaped stone, held in place by a kind of mortar made of clay and Sphagnum Moss, mixed with a very small quantity of soil. The small stones, acting as drainage, would be of course on a lower level and in the invisible or inside part of the crevice. By means of more "mortar" and more small stones the outside part of the fissure is now built up to the height where it is desired the first plant should be, and simultaneously the inside part of the crevice is filled to the same height with a mixture of loam, leaf-mould, small broken stones (limestone) and stony grit. The plant is then inserted with its roots in a horizontal position as mentioned before, and more of the stony soil is filled in and rammed around and between the roots with a small stick. On each side of the neck of the plant a small stone is next driven into the crevice in such a manner as not in any way to injure the roots, but to take the pressure of other small stones used for building up the front of the crevice above the first plant, say to the height of 10 inches or a foot in precisely the same way as was done below the first plant; the second plant is then introduced, and in the same way a third or fourth plant may be added according to the height of the fissure or the size of the plants, but care must be taken not to use the clay mixture as mortar above the last plant, as the more or less impervious clay would check the free access of water to the roots. I use soil and Moss only as a "mortar" for small stones above the last plant. If the tiny crevices between the small stones are not filled up they become a harbour for slugs and other pests.

Edraianthus, or any other plants requiring to be grown sideways (*i.e.*, with their roots in a horizontal position), succeed remarkably well if planted in the manner just described, as water can never rest on the foliage of the plants to any dangerous extent, while free access of water and perfect drainage are assured to the roots. The native home of most Edraianthi is in South-eastern Europe and Asia Minor.

I will now give short descriptions of the varieties I have recommended.

Edraianthus dalmaticus (A. de C.).—Five other names for this plant have already been mentioned, and I need, therefore, not repeat them here. This is one of the best of the genus; it is very robust in growth (as seen by the illustration, fig. 1), and perhaps the easiest to cultivate. In planting, the plants should be kept at least a foot apart, as their spreading tufts when in bloom cover a circle of quite a foot in diameter. The large flowers form clusters or heads, each consisting of from eight to twelve flowers, similar to those of Campanula glomerata dahurica, but of a still brighter violet-blue, and white at the base. May and June are the months of flowering. The leaves, which are linear and form dense tufts, are very numerous and of grass-like appearance. At a first glance their margins appear very minutely serrated, but on closer observation it will be found that they are entire, and that the apparent serration is due to very short stiff hairs, which evenly cover the margin throughout the entire length of the leaf, which is about 4 inches. The colour of the leaves and also of the very numerous bracts is a deep dark green. The height of the plant is seldom more than 4 inches or 5 inches, as the stout flower-stems do not stand up erect, but lie on the ground or stones. Dalmatia is said to be the native home of this charming rock plant.

E. graminifolius (A. de C.) (see illustration, fig. 1).—If this is not identical with the former, it so closely resembles it in every respect that further description is needless.

E. dinaricus (Kern.)—syn., E. pumiliorum (Vis.).—Of this variety an excellent coloured plate appeared in The Garden of January 28, 1893, under the name of Wahlenbergia pumiliorum. It is one of the smallest of the genus and much more neat and compact than the robust E. dalmaticus; it should therefore be planted closer together if several plants are used to form a group. The flowers are nearly as large as those of E. dalmaticus, but they are of a more purplish shade of colour, more bell-shaped in form, and instead of being produced in large clusters, they appear either singly or two or three on a stem. The leaves are very small and narrow, each being 1 inch or 2 inches in length and about one-sixteenth to one-eighth of an inch in width, covered with very minute hairs on the upper surface. May and June.

E. Pumilio (A. de C.) is still more compact than the former (see illustration fig. 2). The flowers are solitary and comparatively large, being quite 1 inch in length and about three-quarters of an inch in diameter, of a very bright and showy purplish blue. The upper surface of the leaves is covered with minute hairs to such an extent as to have quite a silvery appearance, which in all plants, as a general rule, is a sure indication of the requirement of a sunny position. But though the plant itself grows best when its foliage is moderately dry, its roots, though well drained, should never want for moisture. A very handsome specimen, which I had planted in the manner above described in Messrs. Veitch's nursery at Exeter, did remarkably well for several years, but succumbed to drought during an exceptionally dry summer.

E. Kitaibeli (A. de C.)—syn., E. croaticus (Kern.)—grows much more robust than the former; it is a native of Bosnia and grows about 6 inches high. The flowers are large, purplish blue, and the leaves are slightly dentate.

E. serpyllifolius (A. de C.)—syn., Campanula serpyllifolia = Edraianthus thymifolius (Vis.).—This is a charming gem for the rock garden, and planted sideways into an upright or abruptly sloping fissure as mentioned above does remarkably well. The drought during last summer injured several plants under my observation, but they soon recovered. The flowers are very much like those of E. Pumilio, but perhaps of a deeper bluish shade. The foliage, as the name implies, resembles that of the Thyme, but is more compact and glossy.

F. W. Meyer.

Exeter.

IS LAYERING BENEFICIAL TO CARNATIONS?

I notice frequently with plants that are layered and transplanted they often are diseased, while others of the same sort that have not been layered or interfered with in any way show no disease and flower abundantly. I do not say the layering actually weakens, but I maintain that layering and transplanting combined are certainly not beneficial to the plants, nor do they provide us even with larger or better flowers or even in greater numbers. Take, for example, a few well-known border kinds, such as the old crimson Clove, Germania, or Raby Castle. Of the first I know of some large patches several feet across that have been left to themselves for at least three or four years. During this time they have not been layered or interfered with at all, and yet year by year these patches flower far more abundantly than those layered each year, that is to say, a much greater number of blooms may be taken from a bed 4 feet across. In at least four instances the plants are growing in the gardens of cottagers; in two the soil is of a clayey nature, these being in Gloucestershire, the remaining two in Middlesex and on light soil. The growth in each case is similar, *i.e.*, short and compact, and what strikes one is the perfect freedom from the disease to which this kind is so often subject, and which in some districts prevents it being grown at all. In one of the instances cited above I layered some of the growths late in the past summer, as I did in the same garden three years ago, and was informed they had not been touched in the interval. As is natural with retentive clay soil, the soil around these Carnations was quite hard and solid, yet the answer to an inquiry was that "we have had a splendid lot of flowers this year again." I layered a few of the longest, and specially requested the owner not to transplant them, as it seemed impossible to improve on such healthy, sturdy, vigorous patches.

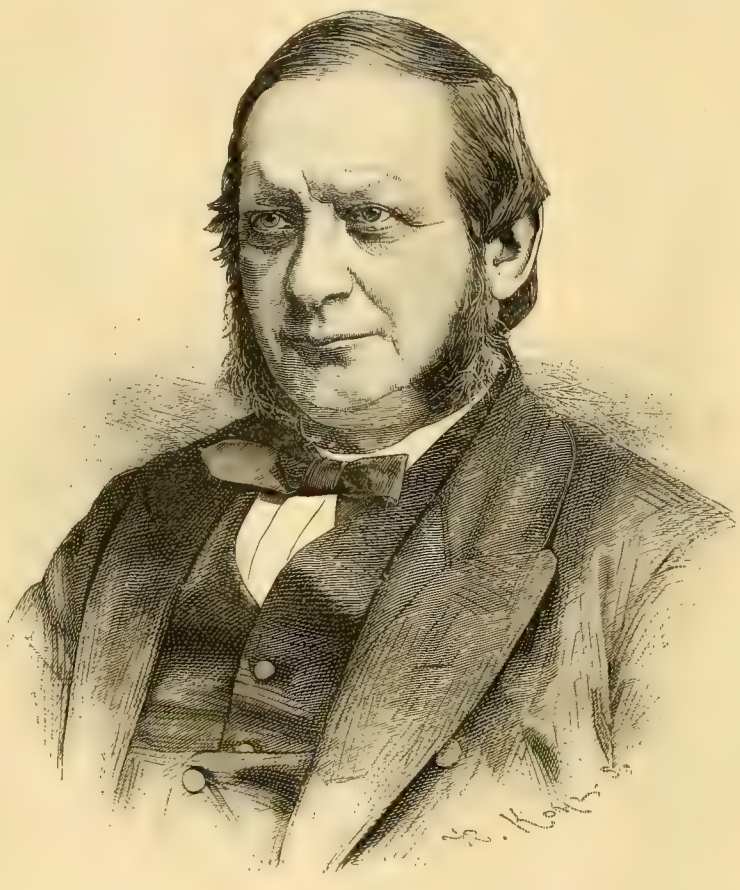
I believe there is something beneficial in the solidity of the soil, that brings with it a certain restricted luxuriance that can scarcely be secured where the plants are layered and transplanted every year. I know that in the loose soil of Middlesex the old Clove dies if layered and transplanted; and yet in two instances about five minutes off, the same plant grows to perfection, with perhaps a couple of hundred growths in the one and quite close together. In the second the quantity is not so great, but in each I look in vain for any sign of disease. Then if we take Germania, another true border kind, we get fine stemmed flowers of nearly double the size when the plants are grown on a second year without layering. Those who only know Germania from the yearling layer have yet to see this grand yellow in perfection. I have experience of the tree varieties being very similar in point of size, and I often wonder whether it is age alone that makes all the difference; in these latter the plants were not shifted on at all. And so with those I refer to in the open garden; they were simply left alone. Or, if the whole thing turns on the age of

the plants and poorness and solidity of the rooting medium, it would be very easy of imitation, and I am inclined to regard it as so. At any rate, the private gardener need not add to his labour the annual task of layering and transplanting all his Carnations if it is bad for his plants, for even by layering and potting much loss and disappointment ensue. Let a few gardeners try a bed or two of a plentiful kind, and at planting time ram them very firmly into the soil. Avoid manure and dispense with layering, and note the results. E. J.

FLOWER GARDEN NOTES.

HARDY PLANTS.—Besides their employment on borders specially reserved for them and in the more outlying parts of the garden, as, for instance, in connection with shrubberies, many hardy plants have of late years been introduced into the formal garden with so much success, that the experiment might well be tried on an extensive scale, especially in those places where labour is somewhat scarce and insufficient to maintain a lot of summer-bedding plants at a high pitch of excellence, particularly in those seasons when these plants require constant attention in the way of watering to produce such results. I should like, however, to point out that in those cases where it is deemed advisable to utilise hardy plants for the geometrical garden, beds of such plants show to the best advantage on turf. Surroundings of Box and tiny gravel paths are not natural associations. Box and gravel should be removed, to be replaced by good bold beds cut out on the turf, allowing plenty of space between. The planting may be carried out to suit any special tastes—a mass of one variety in each bed, bold central blocks with a broad dwarfer edging, or nice large clumps of a fairly tall species, with a dwarfer plant worked in and around such clumps. A few such combinations that may be suggested in the last-named style would be Pæonies, Aquilegias or Lobelia fulgens with Pinks, Spiræas and Pyrethrums with Violas or dwarf Veronicas, Japanese Anemones in the rose and white shades with Iceland Poppies and the like. In the case of species that are represented by a great number of varieties, as the Starworts, Phloxes, Campanulas, &c., large beds might with advantage be filled with one family in variety. If we have, for instance, round or oblong beds of considerable size, the centre might be partially filled with clumps of the taller Phloxes, the suffruticosa section planted in a similar manner nearly to the edge, and all the clumps relieved by a carpet of Phlox subulata in variety running throughout the bed. The wealth of material at the disposal of the planter in the Starworts and Campanulas should render the task of filling occasional beds with these a comparatively easy matter, whilst the difference in the flowering season between the several sorts would give a certain amount of colour in such beds for a very long season. It was partly the desirability of securing a protracted display that led to the suggestion of a combination of a dwarfer carpet with such things as Pæonies, Spiræas, Aquilegias, &c., which, although very beautiful in their season, are somewhat quickly over. In the case of beds that lie at the extremity of lawns it will generally be found advisable to fill them with tall-growing plants, as the taller of the Starworts, perennial Sunflowers, and Solidagos, whilst to give a little variety, room might be found for an occasional clump of Pampas Grass, of the hardy Bamboos, Bocconia cordata, Rhus Cotinus, or any other ornamental plant of similar size. If alterations of considerable extent are contemplated in the flower garden during the coming autumn and winter, and the plants are to hand, that is, if they are to be shifted from one place to another, the ground about them, and also the spaces to be occupied by new beds or borders, may be mulched with litter, Bracken, or rather long manure. The work of preparation may then continue irrespective of frost, and the lifting and replanting also, unless the weather is exceptionally severe.

PRESENT WORK.—Besides the alteration of some borders and planting up others, there is not much to chronicle in the way of flower garden work at present, except the gradual digging up of beds that are to remain empty through the winter, and mulching those herbaceous borders that are in a satisfactory condition and require no alteration.



Richard Gilbert.

A frosty morning is a good time for mulching. The workman should be instructed to break the material up well with his fork, so that it does not go on in lumps, and to avoid the use of leafy matter that would dry quickly and be scattered in all directions with the first high wind. The old stems that are cut away from the border Fuchsias and the stouter of the Starworts may be stacked in a shed, and will afford a job for the first wet day. If stripped, cut into lengths, and tied up in bunches they will answer well for laying in shoots at the summer training of wall trees. Any hardy plants that were sown in spring and shifted on into boxes may be transferred to permanent quarters with the clearing of the beds. The ground for their reception should be well broken to pieces, especially if the plants are small, and a surface mulching of cocoa fibre or leafy matter—partially decayed leaves, that is—is advisable for all things that might suffer from the attentions of slugs.

PYRETHRUMS.—A recent note on Pyrethrums suggested that spring instead of autumn planting was occasionally advisable, given certain conditions of soil, but I should be inclined to advise an alteration of those conditions rather than to defer the planting, the experience of the spring of 1895 being altogether against a waiting policy. The frost was not out of the ground until the middle of March and planting was not practicable until quite the end of that month. A spell of very dry weather followed, with the result that all stuff not well established made no headway, and was not seen to advantage at the time when it ought to have made a good show. If in connection with Pyrethrums a mass of colour on a large scale is deemed more advisable than a great variety of shades, three of the best sorts to plant are Aphrodite, Meteor and Celia, and, following up the idea of planting suggested earlier in these notes, three good Violas to associate with them would be J. B. Ridding, White Swan and Evelyn.

BEGONIA DISEASE.—Thanks are due to correspondents who have furnished us with the necessary remedial measures to cope with thrips on Begonias, but so far as I am personally concerned they are not of any value, the disease that affected my plants not being caused by thrips or anything in the way of insect life. I have received specimens of leaves attacked by the minute form of thrips and examined them closely, and the inference drawn therefrom was that the two visitations were totally distinct. In my case the spot went right through the leaf, and the part so affected, apparently all right this morning, would at night resemble a piece of tissue paper or even of less substance than this. From the description given in several notes, I should imagine that others have suffered in a like manner and that I have yet to find a remedy. Begonia Worthiana was very badly attacked outdoors during one of the wettest summers of the century, a summer when drought-loving insects like red spider and thrips were conspicuous by their absence.

Claremont. E. BURRELL.

Lapagerias in the open.—Lapagerias may be considered practically hardy in the south-west of England, and Mr. R. W. Nicholson's note (p. 369) shows that in North Wales in sheltered positions they are the same. I am acquainted with five cases where these beautiful climbers are growing out of doors. At Kingswear, on the banks of the Dart, both the red and white varieties were doing well a few years ago. This was, however, in an exceptionally favoured spot, entirely sheltered from the north and east winds—Plumbago capensis also growing in the open and flowering in the same garden. Fine plants of L. alba and rosea are now in flower against the north wall of the private chapel adjoining Gnaton Hall, near the river Yealm, S. Devon. They are planted in peat and have made vigorous growth, reaching the eaves of the building. The flowers are very large and handsome, those of L. rosea in particular being of far greater size and more brilliant in colour than blooms grown under the shelter of glass. I find that in no winter since their planting have these plants been afforded the slightest artificial protection, yet the severe weather at the commencement of the present year has had no deleterious effects on them, as they are now in the best of health. Many specimens of Escallonia macrantha have, however, been killed during the winter, and this shrub is evigently much less hardy than is generally sup-

posed. Given a deep bed of peat and sand, with good drainage and an ample supply of water during the growing period, no one need despair of growing the Lapagerias successfully as climbers in the southern counties. Care should be taken to prevent the slugs eating off the young shoots, of which they are inordinately fond.—S. W. F.

OBITUARY.

RICHARD GILBERT, OF BURGHLEY GARDENS.*

A good man and a good gardener has passed away to a well-earned rest, and some of those—and they are many—who best knew his life and his ways will feel that men may come and men may go, but that they are not likely to look upon his like again. To many, Mr. Gilbert's death on the 22nd inst, in his seventy-fifth year, will come as a surprise, but he had been ailing for some time, and a more than usually severe bronchial attack carried him off on the date named. In August last I had the pleasure of spending a happy day with him in the well-known High Park Gardens at Burghley, and found him seemingly hale and hearty as of yore, though even then he had symptoms that gave his family and personal friends some uneasiness, but his own character was ever the reverse of a doleful or complaining one, and his well-known cheerful conversation full of keen observation as to both men and things. Amusing it always was, but a ring of strong common sense that ran through all he said always redeemed his remarks from aught that was commonplace, uninteresting or unkind. His subtle and exquisite sense of humour was one of his personal charms, but it was used delicately and served to cheer and vivify; for even his strictures had a manly sympathy of tone that endeared him to all with whom he came into contact during a useful and honoured career. He was courteous and genial to all, rich or poor, and all gardeners had his aid and sympathy in their troubles, as well as generous appreciation of their success. To young gardeners especially he was a kind and considerate employer, and no foreman or journeyman ever left Burghley except to take up a better position, in many, even if not in most cases secured for them by our worthy friend. To say that such a man was popular is not enough; he was sincerely respected and deeply beloved. Many successful gardeners to-day owe their position to Gilbert of Burghley, who forwarded their interests with a peculiarly quaint professional pride. Mr. Gilbert was, I believe, a native of Sussex; at any rate he always referred with pride and pleasure to his early experiences at Arundel Castle and at Worksop Manor under the late Mr. John Wilson, of Mr. Myatt, and of the pleasant days in the old Chiswick Garden of the R.H.S., when Dr. Lindley held command there, and the gardens had not been shorn of their area and prestige.

As a gardener, his strength lay in the superb cultivation of all sorts of fruits and vegetables Flowers he loved, and could grow well also, but his real strength went to the fruit and kitchen garden. His own productions are now familiar to us all, and amongst many others I need only name Chou de Burghley, the Burghley Brussels Sprout, Tomatoes and the Universal Savoy. The Grapes, Figs and Melons at Burghley were specialities, but Gilbert was even more proud of his successes with his friend Laxton's new Peas, Potatoes, Tomatoes and Strawberries, and he was especially proud of his triumphs in the way of open-air Peaches in a cold midland climate, apparently not at all suited to such a culture. His strain of beautiful double-flowered Chinese Primroses is well known, and was figured in The Garden, vol. xvii., p. 176, and the Harbinger Primrose as grown at Burghley was an especial favourite with him. Mushrooms, both indoors and in open-air beds, were largely and well grown, and he had a knack of producing early Potatoes in January and February by selecting the sets in July or August and keeping them cool and dry for a year, after which they were planted in boxes of leaf-mould and placed in a warm, dark position, where they produced new tubers from the old sets without any haulm or top growth whatever (*vide* The Garden, February 15, 1879, p. 150).

We may also refer to his practical and handsome way of growing pot Vines bearing ripe fruit for dinner-table decoration (The Garden, vol. iv., Oct. 25, 1873, p. 333). Readers of The Garden will remember the original and pithy manner in which our friend announced his new productions. One of these may be quoted as a specimen from this paper, March 29, 1890 (p. 307), where his friends are offered the choice of "Potatoes without disease, Peas without mildew, and Cabbage that requires no bacon." As an inventor, Mr. Gilbert years ago gave us improved handlights or portable plant protectors that are most useful in gardens, both large and small.

Mr. Gilbert had considerable literary ability, his contributions to The Garden and other horticultural publications being remarkable for their short and pithy sentences and for their sterling common sense. The following note from Mr. Gilbert reveals a good deal of the man. It is from The Garden, vol. xxxi., March 25, 1887, p. 222:—

> I am waiting to show round the Earl and Countess of Rosslyn, and I cannot employ my time better than in giving you a bit of my mind. In the first place you tell the public I should raise seedling Apples and get varieties to match the American. You certainly do not say as much, but I read between the lines that you mean as much. Let me tell you I have been raising Apples for twenty years, but, unfortunately, have not yet got a good one. At the great Chiswick Apple show I picked out two varieties out of 8000 dishes which I thought the best, ordered the trees (eight) at 7s. 6d. each, but they were reported as scld! I write to let you see I am preaching progress. I will send you a dozen seedlings by post. Now I hope in the next edition of The Garden that you will put me on my merits. Do not let it be said that I raise Cabbages alone! If you could see my houseful of Harbinger Primrose, you would say and think differently. Next week I am going in for Peaches outside, that nobody appears to grow. Depend upon it, this is a matter of over-building Peach houses, exactly the same as in the case of Melons. Nobody can grow Melons now in manure frames, because they have houses!
>
> [An interesting and suggestive note, [as most of Mr. Gilbert's are. We are glad to hear of all his doings. Peaches out of doors and Melons in frames are, we hope, not to disappear from our gardens, of which they were once the pride. The last time we were at Burghley we saw good Peaches on walls there. The place is not nearly so favourable for that fruit as many districts in the south and west of England.—Ed.]

As superintendent of the extensive gardens at Burghley House for nearly thirty years Mr. Gilbert met the most distinguished people of all ranks, and the late Marquis of Exeter not only valued him as a good gardener, but treated him as a faithful friend, and left him a substantial legacy upon his death some few months ago. By his fellow-gardeners Gilbert has for many years been recognised as a master of garden craft, and he leaves behind him a memory that will ever be green to all who enjoyed his genial friendship. He leaves a widow and a family of grown-up children to mourn his loss. A most lovable man has left the world richer than he found it, for his presence ennobled life, and he will long be missed from the locality he had made in a sense his own. Of sturdy build and full of energy, Gilbert always reminded one of the Oaks of his native county, not particularly large in size, but strong-hearted and sound to the core.

F. W. Burbidge.

* Died at Burghley, November 22; buried at Barrack Churchyard, November 25, 1895.

Mrs. Bruce Findlay.—We regret to announce the death of Mrs. Bruce Findlay, which took place at the Botanic Gardens, Manchester, on Wednesday, November 20.

Mr. James Walters.—We regret to announce the death of Mr. James Walters, of the Mount Radford Nurseries, Exeter, which occurred on the 20th inst. Mr. Walters was widely known, and his loss will be felt by many friends.

SOCIETIES AND EXHIBITIONS.

ROYAL HORTICULTURAL SOCIETY.

November 26.

There was an appreciable falling off in the number of exhibits at this meeting, yet there were quantities of most interesting things staged for the inspection of each committee. The falling off was in the miscellaneous groups, &c, usually to be seen at these gatherings, leaving the chief points of interest to be centred in the newer or more uncommon plants. There was an excellent attendance, taking into consideration the busy season of planting now in full swing.

The floral committee had no finer exhibit placed before them than the group of hybrid Rhododendrons of the javanico-jasminiflorum hybrids of Veitchian origin. If anyone should previously have had doubts as to the decorative value of these charming flowers, such doubts should, after an inspection of this exhibit, be entirely dispelled. These choice hybrids will always remain one of the greatest triumphs of the hybridiser. In the exhibition in question there was a wide range of colour, whilst the whole of the plants were flowering in a small, and in several instances in quite a dwarf stage. Chrysanthemums constituted the next important feature here, several very promising novelties being staged by the best-known growers.

The Orchids were not numerous. Several good and choice things chiefly in hybrids were, however, staged; these consisted chiefly of Cypripediums and Calanthes, whilst of species the most notable was the new Catasetum imperiale from M. Linden, this being the only Orchid shown to which a first-class certificate was awarded.

Before the fruit committee the two chief exhibits were the collection of vegetables, chiefly of the Brassica family, of which some forty vars. were staged with other good vegetables in season from Syon House by Mr. G. Wythes, and the comprehensive exhibit of Apples and Pears by Messrs. J. Cheal and Sons, Crawley, most prominent amongst which were the grand fruits of Bismarck Apple, both size and colour being most noticeable.

Orchid Committee.

A first-class certificate was awarded to—

Catasetum imperiale.—A very distinct and noble-looking species, of which one plant with a spike of eight blooms was shown. The flowers are individually above the average size, the labellum, as usual, being the most prominent feature; this is large and of wax-like substance, incurved in shape, the pervading colour being a

deep claret tint with a greenish white edge, broader towards the front part; the upper sepal is slightly tinted also with the same colour, whilst the petals are creamy white, the growth robust. From Mons. Linden, Brussels.

Awards of merit were voted to the following:—

Cattleya aurea var. Marantina, which, as usual, has a splendidly developed lip, with the purplish crimson of a darker tint than usual and pervading the same to its base, the golden veining being less prominent than usual, with pencilings here and there of the purplish crimson in the petals and slight flushings in the sepals even. From Mr. T. Statter, Stand Hall, Manchester.

Epidendrum Wallisi-ciliolare (E. Wallisi × E. ciliolare).—A very distinct hybrid, having more of the style of growth of E. Wallisi, but with increased vigour and sturdier habit, E. ciliolare being in the way of a Cattleya in growth. The flowers partake more of the former parent, being slightly larger and paler in colouring; the sepals and petals are self-coloured (a bronzy buff), the spots of E. Wallisi being quite eliminated; the lip is of a pale straw colour and fringed, but not so much as in E. ciliolare. From Messrs. J. Veitch and Sons.

Masdevallia Chimæra aurea.—A distinct orm of this well-known species, in which the chief distinctive feature is the old gold ground colour, overlaid with the veining and network in a dark tint of maroon. The flowers being drooping, they did not show to advantage. From the Botanic Gardens, Glasnevin.

Cypripedium platycolor (C. concolor × C. Stonei platytænium).—A hybrid which attracted much attention by reason of the almost total disappearance of any influence of the last-named parent, the only perceptible trace being in the elongated lip. The one spike bore three fresh, well-developed flowers, the ground colour of which is a creamy yellow, suffused and spotted with vinous purple, both the dorsal sepal and the petals pointing clearly to C. concolor, whilst the foliage had some trace of C. Lawrenceanum, only in a less marked degree. From Sir Trevor Lawrence's collection.

Cypripedium Madeleine (C. bellatulum × C. Argus).—In which again the influence of the former parent greatly predominated, the petals here showing traces of C. Argus in the spotting, whilst the contour of the flower was decidedly towards C. bellatulum, the creamy ground colour being profusely spotted and flushed with a dark claret tint.

Botanical certificates were awarded to Arundina Phillipi, a very pretty Orchid, of slender, Grass-like growth, surmounted with small flowers of Phaius-like form, the sepals and petals white, with a flush of purple, and the lip well marked in the same tint; from Sir Trevor Lawrence; Dendrobium subclausum, from Moluccas, a species of very slender growth, studded here and there with small orange-scarlet flowers; from Messrs. J. Veitch and Sons; Calanthe sp., new, with small, dark rosy purple flowers, and the stems of a dark bronzy green. From the Botanic Gardens, Glasnevin.

To Messrs. Sander and Co. was awarded a silver Banksian medal for a select group, which consisted of several of the best of more recently raised hybrid Calanthes, as C. Bryan, somewhat in the way of C. vestita rosea, the colouring being a deep vinous red; C. Wm. Murray, also with white sepals and petals, the lip entirely suffused with similar colouring to the last; C. Bella, with its flowers entirely suffused with rose colour; C. Florence, another beautifully tinted variety, and C. Clive, of a deep rosy shade, in the way of C. Veitchi. Cypripediums consisted of C. Ashburtonæ expansum; C. Mme. Cappe, a distinct looking hybrid; C. Alcides, a hybrid between C. insigne album marginatum and C. hirsutissimum, the latter parent being distinctly noticeable in the petals, and C. maculatum, a massive looking variety. Of Odontoglossums there was an excellent form of O. crispum of great purity; O. bictonense album was also shown. Other good things comprised a splendid mass, full of flower, of Sophronitis grandiflora and a smaller plant of a finer variety of this species; Brassia Lewisi, with less of the greenish tints and more yellow than in most species; Phaio-Calanthe Berryana, a cross between Phaius Humbloti and Calanthe masuca, with traces of each of its parents very distinct; P.-C. Arnoldæ, an improving hybrid; Angræcum polystachys, a charming small-flowered species of erect growth; Habenaria Susannæ (again included), Bulbophyllum crassipes, a singular Orchid with short dense spikes of dark flowers; Lycaste Skinneri in two distinct forms; Bollea Schrœderiana, certificated last year; Odontoglossum Schrœderianum, a distinct species and very pretty; Pescatorea Lehmanni and P. Klabochorum, Lælia autumnalis alba of the purest white, and Aganisia ionoptera.

Mr. Lucas, Warnham Court, Horsham, showed Cypripedium warnhamense (C. Curtisi × C. philippinense), a distinctly beautiful hybrid, with long drooping petals, these being spotted with vinous purple on a pale straw colour ground, the pouch being of a bronzy tint, and the ivory white dorsal sepal lined with dark purple. From Mr. G. H. Palmer, Springfield, Trowbridge, came a few good hybrid Slippers, C. St. Mark being much after C. Lathamianum, with a bold flower; C. hyb., with a large lustrous, dark-coloured flower, and another after C. Leeanum, with others in a cut state. From Sir F. Wigan came varieties of Barkeria spectabilis, including the best forms. From the same source came Lælio-Cattleya Ingrami, a superb dwarf hybrid between C. aurea and Lælia Dayana, the influence of the former parent being very perceptible in the rich velvety crimson and wavy margin of the lip, the sepals and petals taking more after C. Dayana.

From the Botanic Gardens, Glasnevin, came Phaius Bernaysi (Fiji), a lovely species, with soft lemon-yellow sepals and petals, the reverse side ivory-white, and the lip a pale golden yellow. From the Marchioness of Londonderry, Wynyard Park, came a good variety of Lælia anceps, and from Mr. Temple, Leyswood, Groombridge, Cattleya labiata (Temple's var.) with large, but pale flowers, and Cattleya Miss Williams (C. Harrisonæ × C. Gaskelliana), in the sepals and petals of which there was a clear lilac tint, due no doubt to one of the best forms of its former parent. Mr. Statter showed Cypripedium plumosum (?), a very dark looking hybrid, the dorsal sepal affording a relief in its margin of white. C. Leeanum giganteum came also from this source. From Messrs. E. Vervaet and Co., Belgium, came a cut example of Odontoglossum crispum Franz Masurel, with bright crimson spots in the sepals and petals; it is one of the most intensely coloured forms. Mons. Linden showed Cattleya maxima, a good form, but damaged in transit. Messrs. Hugh Low and Co. showed hybrids and species of Cypripediums, amongst which were C. Leeanum grandiflorum and C. L. superbum, two of the best forms; C. Harrisoni superbum, C. Niobe, a lovely little hybrid, and C. callosum grandiflorum, with the dorsal sepal of an unusual size. Phalænopsis intermedia Portei and Cattleya aurea were also included, the latter a fine bloom. Cattleya Trianæ, an extra good form with large well-marked lip, came from Mr. Clark, Wrexham, the flowers being evidently from an imported plant.

Floral Committee.

Awards of merit were granted to the following:

Begonia Frœbeli incomparabilis.—This fine winter-flowering Begonia is the result of crossing B. Frœbeli and B. polypetala, the characteristics of the former parent being most prominent. The plant has enormous leaves shaped like those of B. Rex, the full-grown ones being 18 inches long and 13 inches wide. They are of a deep green colour with the leaf veins somewhat depressed, giving the surface a wrinkled appearance. These great leaves droop over and hide the pot. In leafage alone the plant is remarkably striking, but even more so in bloom. The flower-stems rising to a height of nearly 2 feet, stand up boldly erect, the flowers disposed in a branched raceme, from 20 to 30 buds and blooms being counted at the top of one of the several spikes the plant was carrying. The flowers, each about 1½ inches in diameter, are of a rich glowing red colour and brilliantly effective at this dull period. It was shown by Mr. J. T. Bennett-Poë, Holmwood, Cheshunt.

Rose Enchantress.—This is a new Tea-scented variety and possesses the free and persistent flowering merits of this race, as was abundantly shown in the large group of plants shown. The flowers in the bud and half-expanded state are slightly blush-tinted, but with age they turn to a soft, pale cream colour, and in this state much resemble those of the variety Mme. Hoste. The form is globular, the flowers droop, and scent is but faintly perceptible. The number of plants shown and the many flowers they carried point to its usefulness as a forcing kind, and doubtless another summer we shall be able to form a better opinion of its merits from open-air blooms. It was raised and shown by Messrs. W. Paul and Son, Waltham Cross, Herts.

Chrysanthemum Golden Dart.—A Japanese variety, likely to prove useful to market growers or anyone requiring cut flowers in quantity. It is of the W. H. Lincoln type, of a rich yellow colour, and carries its flowers upon a good length of stem, whilst the habit of the plant is another point in its favour, as its height does not exceed 4 feet. Its raiser worked to secure a plant that could be housed in the low-pitched structures so much used by market growers, and he has realised his aim as far as this kind is concerned, which should become a popular market sort. It was raised and shown by Mr. E. H. Jenkins, Hampton Hill.

Chrysanthemum Bonnie Dundee.—This is an incurved kind, the florets rich bronzy buff, flushed with yellow towards the edge, their inner surface pure yellow. The flowers are of medium size. It came from Mr. R. Owen, Maidenhead.

Chrysanthemum Country of Gold.—This belongs to the decorative class, and has small tasselled flowers borne freely in graceful sprays and of a clear yellow colour. Also from Mr. Ower.

Chrysanthemum Mrs. Ellen Newbald.—Another decorative variety bearing lovely clusters of flowers of a soft canary yellow colour and reflexed form. This also was shown by Mr. Owen.

Chrysanthemum Olive Oclee.—This is an incurved Japanese, extra broad in petal, the flower full, deep and well finished. The outer petals are bronzy yellow, but those towards the centre are pure yellow. It was shown by Mr. H. J. Jones, Lewisham.

Chrysanthemum Surprise.—An Anemone-flowered variety with large shapely blooms, in colour deep lilac suffused with white, the outer petals spreading, but prettily incurved at their tips. Also from Mr. Jones.

Chrysanthemum William Slogrove.—This is an incurved Japanese of a deep rich yellow hue and great size, but there is no refinement in such mop-like blooms. It came from Mr. W. Slogrove, Gatton Gardens, Reigate.

There were not many miscellaneous exhibits on this occasion. Messrs. J. Veitch and Sons received a silver Banksian medal for a very attractive group of the Javanese Rhododendrons, many varieties being shown in a wide range of colour from pure white to deepest red. A similar award was granted to Messrs. W. Paul and Son for their fine exhibit of pot plants of the Tea Rose Enchantress, already described, more than a dozen well-flowered plants, making a prominent group. Mr. R. Owen also received a silver Banksian medal for an exhibit comprising a number of new Chrysanthemums, noteworthy varieties being W. Owen, dull chestnut-red; Princess Maud, blush; Mme. Lebeque, white; and Major Bonaffon, the new incurved yellow. Mr. H. J. Jones showed some fine kinds, as Mrs. J. H. Harvin, white incurved Japanese; Snowstorm, a long-petalled single white kind; Dede nons, pretty blush, reflexed; and Major Bonaffon, in very fine form. Mr. W. Wells, Redhill, showed several

Japanese and incurved kinds. Mr. Herrin, Dropmore Gardens, sent bunches of an old thread-petalled decorative kind named Gold Thread, in colour a harmony of red and gold. Mr. H. Briscoe-Ironside also had a varied selection of kinds of his own raising, whilst Mr. W. Jinks, Weybridge, and Mr. M. Silsbury, Shanklin, Isle of Wight, also contributed several kinds. Dracæna lentiginosa, shown by Messrs. J. Laing and Sons, is like the narrow-leaved Cordyline in all respects save colour, its leaves being a dark bronzy green. From Mr. Crawford, Coddington Hall Gardens, Newark-on-Trent, came three bunches of winter-flowering Carnations; and Mr. F. W. Moore, Botanic Gardens, Glasnevin, sent a cluster of flowers of Sphæralcea umbellata, a malvaceous plant having dull red flowers. Canarina campanulata, a curious climbing plant with large bell flowers quaintly coloured in terra-cotta and chocolate, was shown by Mr. Rapley, gardener to Mr. H. Grinling, Harrow Weald; and from Mr. J. Crook, Forde Abbey Gardens, Chard, came a bunch of the well-known, always-blooming Primula floribunda.

Fruit Committee.

There was a limited number of exhibits before this committee, only two large collections being staged, one of fruit, the other of vegetables. Many seedling Apples were sent, but only one was considered worthy of an award.

An award of merit was given to—

Apple Stubbs' Seedling, a medium-sized fruit. It is very highly coloured, somewhat like Devonshire Quarrenden in colour, but larger, flesh firm and of excellent flavour. It is a valuable addition to the dessert varieties and a good keeper. From Mr. W. Palmer, Andover.

Messrs. Cheal and Sons, Crawley, Sussex, sent a very fine exhibit of Apples and Pears, 100 dishes being staged. A large mound of very fine Bismarck Apple was specially noticeable. Jubilee and The Queen were also very fine, with grand examples of Alfriston, Waltham Abbey Seedling, Lane's Prince Albert, Peasgood's Nonsuch, Cox's Pomona, and other cooking varieties. Among dessert varieties, Margil, Armorel, Cox's Orange, and Ribston Pippin were noteworthy. Beurré Sterckmans, Chas. Cognac, Duchesse de Nemours, Beurré Abbé Lucas, Duchesse de Mouchy, Vicar of Winkfield, Josephine de Malines, and Bergamote Colette were the best Pears (silver Knightian medal). Mr. Wythes, Syon Gardens, sent three dozen varieties of Brassica, with Leeks, Asparagus, Seakale, Mushrooms, Cucumbers, and Endive. The collection was sent to show the green types of vegetables in season. Snow's Winter White, Walcheren, and Veitch's Protecting Broccoli were staged in quantity, a dozen varieties of Borecole, the Scotch Green-curled and Arctic Kales being very good. Several varieties of Savoys and Cabbage of the Colewort and St. John's Day varieties, Dwarf Gem, Paragon, and Paris Market Brussels Sprouts, and Sion House and Telegraph Cucumbers were also noteworthy (silver Knightian medal). The same exhibitor also sent a seedling Potato, Wythes's Seedling, a cross between Myatt's Ashleaf and Beauty of Hebron. This the committee requested to be sent to Chiswick for trial. A new Artichoke named Vilmorin's New White was also sent. It has a very nice tuber of superior shape, being much longer, with fewer knotty protuberances, and with a white skin. Mr. Farr, Spring Grove Gardens, Isleworth, sent his new Tomato All the Year Round. This was certificated this year. The fruits sent were of excellent quality, and the fruiting growths were heavily laden with well-coloured fruit, showing its value for winter cropping. A very nice dish of Tomato Nield's Seedling, somewhat like Conference, came from Mr. Nield, The Horticultural College, Cheshire. It was requested to be sent to Chiswick for trial next season. Mr. J. Crook, Forde Abbey Gardens, Chard, sent Coe's Late Red Plum, nice fruits, but past their best as regards flavour. Mr. Palmer sent a new seedling cooking Apple, a very late fruit. This was desired to be sent again later. Mr. Wythes sent a seedling dessert Apple named Christmas Pearmain. Mr. Stewart, Nottingham, also sent a seedling Apple. Messrs. Lane and Son, Berkhamsted, had a very fine basket of Lane's Prince Albert, well meriting the cultural award given.

The lecture by Mr. J. Mason was on Asparagus. He briefly alluded to the plant's natural affinities, distribution in a wild state, and the reputed length of time it has been cultivated, which is believed to date back beyond the commencement of the Christian era. As a market grower of over thirty years' experience, it was his opinion that we were able to produce in England Asparagus which, though not so large in size or so taking to the eye, was superior in quality to that sent into our markets by the foreign growers. Large areas of land to the south-east of London that at one time were almost wholly devoted to Asparagus were now covered with houses, but he thought fresh land should be brought into a suitable state and devoted to this vegetable. In the preparation of the soil, sowing the seed, best age at which to transplant, and most suitable period of the year for doing it, he advised no change in or departure from the practice familiar to all practical men, which he briefly detailed. Deviation from the approved methods meant disaster as regards this vegetable, as, for example, in regard to planting he once when experimenting made a new plantation in the winter and lost ninety per cent. of the plants. He favoured culture in rows at 2½ feet apart with 1 foot between the plants, this way being preferable to beds, as it involved much less labour. There was a good attendance and the lecturer was heartily thanked for his able and very practical address.

Notes of the Week.

Carnation Yule-tide.—Mr. J. Forbes, of Hawick, sends us some blooms of a seedling Tree Carnation. The flowers, rich scarlet, are well formed, do not split the calyx, and the plant appears to be of a strong and vigorous growth. It has been awarded a first-class certificate by the Scottish Horticultural Society.

Begonia Frœbeli incomparabilis shown at the last meeting of the R.H.S. was greatly admired. It is of noble growth, with large leaves, yet of dwarf habit and with tall erect spikes of vivid scarlet flowers of the true B. Frœbeli form. This noble plant came from Mr. Bennett-Poë's collection of choice subjects.

Chrysanthemum Phœbus.—Mr. H. Shoesmith, Claremont Nursery, Woking, has sent us a remarkably fine flower of this new Chrysanthemum, which has been largely shown this year. The flower is large, pure yellow, full and deep, and of exceptional substance. It ranks among the best of the new varieties, and will no doubt be often seen on the exhibition board. Included were some fine sprays of the useful single kind Purity.

Campanula hederæfolia.—A very pretty dwarf Campanula, found in mountainous and rocky districts in Europe and North America. It forms handsome tufts with slender, spreading branches, which recurve and creep along the ground, bearing angular leaves of a pale green colour and small, light blue solitary flowers on slender peduncles. This handsome trailing Bell-flower loves the full sunshine and a position on rockwork, but does not thrive in calcareous soil. —H. Correvon.

Androsace Charpentieri. — A charming tufted plant, forming a cushion of verdure of a greyish green hue, and composed of numerous rosettes of elliptical, very obtuse and slightly pubescent leaves. In May and June it bears numerous flowers of a fine carmine-rose colour on flower-stalks about twice the length of the leaves. This is a rare species found on the Alps of Lombardy, and easily acclimatised by sowing the seed. It requires full exposure to the sun and a well-drained crevice on a rockwork.—H. Correvon.

Angræcum Leonis.—This is a native of the Comoro Islands, where it is said to have been collected at an altitude of 5000 feet. It is a singularly distinct Orchid, and even for an Angræcum, a very beautiful and interesting one. Its thick, flat leaves, like a scimitar in shape, are set edgeways in two opposite rows, as in the Irids. It is a free flowering species, producing abundant racemes of two or more flowers. The Angræcums do not give us much variety in colour, and this, like all the others, is white, but of a purer shade than frequently happens. The flower is 2 inches to 3 inches wide, the lip being twice or thrice the size of the petals. It has a spur about 5 inches long, twisting upwards at about half its length, forming a loop about the middle. The species is also known as A. Humbloti, both this and the present name being given in honour of its discoverer, M. Leon Humblot. On the whole, there is perhaps no Angræcum so desirable as A. sesquipedale, but after that A. Leonis is the one most people would wish to first possess.

Cymbidium Mastersi.—There are few white Orchids flowering during the last two months of the year that are more attractive than this. It is most graceful in habit, having slender arching leaves 1½ feet to 2 feet long. The flowers, too, are borne very freely and are almost entirely pure white; there is, however, a patch of yellow on the throat of the lip, and it is also marked with a few spots of a rose-purple colour. Its value is enhanced by the Almond-like perfume of the flowers, which are usually from three to six on each spike, and individually measure from 2 inches to 3 inches across. The species is a native of Assam, and was introduced to this country in 1841. Like most of the Cymbidiums, it likes a compost which contains at least one half fibrous loam; the remainder may consist of peat, silver sand, and some drainage material, like finely broken potsherds or soft brick. It requires an intermediate temperature. In the rearrangement of Orchid genera by Bentham in the "Genera Plantarum," he has separated this species and C. elegans from Cymbidium. They now constitute a new genus—Cyperorchis.

Plum Wyedale.—I cannot quite agree with "W. G. C.'s" remarks with regard to Wyedale Plum (The Garden, page 390). "W. G. C." thinks it is because of the small size of the fruit that it is not more largely grown. I think it is because it has not been advertised much. It is a grand late cooking Plum, but for dessert it might do to look at, and that is all. The Blue Impératrice and Ickworth Impératrice come in for dessert at the same season, for they will hang a long time. I have often gathered them in November. About twenty-six years ago the first Wyedale Plum tree was planted in the Bickley Garden, Kent, and a year or two after some heavily-laden branches of beautiful fruit were taken to one of the Crystal Palace shows, but it did not then, as now, gain notice. Quite likely this was the first time it was exhibited. At Farnborough, in Kent, it was grown, I should think, between thirty and forty years ago for supplying the London market, and twenty years ago it was plentiful in the Brighton market.—James Neighbour, *Copped Hall Gardens, Epping.*

Snowdrops. — The beautiful illustration of these lovely early spring flowers naturalised (p. 395) recalls to my mind many similar spots, notably at Linton Park, near Maidstone, where the Snowdrops had been left undisturbed for many years and had spread out into broad masses under the overhanging branches of lofty forest trees. The finest beds of them were under Lime trees. Then there were winding rows or edgings to woodland walks, and clumps and masses in all directions, for the bulbs flourished so well in the Kentish soil, that one had only to scatter the bulbs and cover them with soil and leave them alone, and a good bed was soon formed. But it

must not be supposed that they will luxuriate anywhere and everywhere in the same way, for since I have resided in Hampshire I have planted thousands of bulbs in the hope of getting them to increase, but they all die away after the second or third year. It seems as if they are not at home in such close proximity to the sea. In a nursery close to a town where every foot has to be cultivated there are none of the mossy banks and grassy glades that appear to be necessary for Snowdrops. Although I have seen nearly every kind of cultivated bulb grown and flowered to perfection in pots, flower beds, and borders, I have never yet seen Snowdrops looking really happy except when left alone, as shown in the illustration.—James Groom, *Gosport*.

Anthericum lineare foliis variegatis.—This was sent out about 1880 under the name of Anthericum Makoyanum. It has the habit of the type, but grows larger. The leaves are 1½ inches broad, 15 inches long, with a beautiful, distinct, large, creamy white or yellow margin, giving the plant the aspect of a small Pandanus Veitchi, and a rich ornamental character. It produces a striking effect planted in the open ground as an edging around large beds in a half shaded position, or as a carpeting under trees or large tropical plants, such as Wigandia, Caladium esculentum, it is invaluable. If grown in pots or lifted from the open air in autumn and potted it will be found a capital plant for greenhouses, conservatories and drawing-rooms, and its fine variegated leaves will last all through the winter without any special care. It is very strange indeed that such a worthy plant is so seldom seen in gardens. It is easily cultivated and prefers a light porous soil, say leaf-mould, peat and sand in equal parts, plenty of moisture in summer and moderate waterings in winter. When the soil is too rich, the leaves are not so distinctly and brightly variegated. Plant out in May, take up and repot in September, and winter in a temperate house. It is easily propagated in spring by division of the numerous offsets, by the bulbils produced on the stems, sown as soon as ripe in pans and kept in a greenhouse, and by seeds, which are freely produced.—D. Guiheneuf.

Selenipedium Schlimi —Amongst the Lady's Slippers of the New World (which, compared with those of the Old, are few in number) there is none more interesting to cultivators than this. It is the only one of the group whose flowers are not largely green in colour, in this instance being almost entirely white and pale rose. The flower is 1½ inches or a little more across, the curious inflated lip having a very small opening. All the parts of the flower are covered with a soft pubescence. The leaves of this species are narrow, as a rule less than 1 foot long; as in all the Selenipediums, they have a long pointed apex. It has always had the reputation of being difficult to keep in health, but there is a plant now flowering in the collection at Kew which has been there for fourteen years. It is probable that plants of this species are often kept too hot; it appears to thrive better as an intermediate than as a stove plant. Another point in its cultivation is, that even more than other Lady's Slippers does it revel in abundant moisture. Although so frequently unsatisfactory in health itself, it has, by being fertilised with other species, produced a progeny which in robustness and vigour is certainly the equal of any other hybrid Orchids. Of those raised from it, it is only necessary to mention S. Sedeni, the first of one of the most useful races of hybrid Orchids. It has, however, been surpassed in beauty by others of closely allied, but later origin, most of which we owe to the skill of Mr. Seden.

Trichosma suavis.—Over all the broad surface of our Indian empire there is no area that, for its size, contains more to interest the naturalist than the comparatively small district known as Khasya. Among the many fine Orchids which hail from there, there are many which no doubt surpass Trichosma suavis in showiness, but there is none more sweet and charming. It is an old Orchid in English collections, having been first imported fifty-five years ago, but at the present time it is far from common. It has thin, erect, tapering stems about 8 inches high, each of which carries a pair of oblong, bright green leaves. The flowers, which are usually at their best in November—and not in spring, as has so frequently been stated in books—are produced six or eight together in a raceme which springs from between the two leaves. The sepals and petals are creamy white, whilst the lip has its side lobes white, striped with a rich brownish red, and the central lobe yellow, with a crimson margin. Each flower is about 1½ inches in diameter, and has a delightfully sweet fragrance. This Orchid has been placed under the genus Cœlogyne, to which it is undoubtedly closely allied, but it differs from that genus in its narrow, erect stems and Lily-of-the-Valley-like habit. As has already been intimated, it is not very much grown in England, but when it is, it is as often as not treated wrongly by giving too high a temperature. It is a cool intermediate plant, and will thrive at the warmer end of the Odontoglossum house. It should never be given greater heat than that of the Cattleya house, and this only when in active growth. It should be potted in peat and Sphagnum and kept moist at all times.

Public Gardens.

Open spaces.—The monthly meeting of the Metropolitan Public Gardens Association was held at 83, Lancaster Gate, W., the Earl of Meath, chairman, presiding. It was agreed to offer to open some additional school playgrounds on Saturdays, to contribute towards the purchase of the Guy's Hospital disused burial-ground, S.E., and to undertake the laying-out of the ground, to improve and furnish seats for the enclosure round St. John's Church, Smith Square, S.W., to acquire a small burial-ground in Long Lane, S.E., to add to the adjoining one (now being laid out for public recreation), and to draw the attention of the London County Council to the vacant site in Compton Place, Hunter Street, W.C, with a view to its remaining unbuilt on, in the midst of its crowded surroundings. It was announced that Lord Meath had opened to the public Bartholomew Square, E.C., on the 5th inst., which had been acquired by the St. Luke's Vestry through the instrumentality of the association, towards the laying out of which it had also contributed £182. Amongst many matters considered at the meeting were the proposed acquisition of the Copperas, Bromley, E., Brixton Oval, a large park at Muswell Hill, N., a site in Deptford, the churchyards of St. James's, Pentonville, and St. James's, Piccadilly, Falcon Court, S.E, and Ham Common, S.W.

The weather in West Herts.—On the 22nd the temperature in shade rose to 54°, but since then the weather has remained cold, and during the night preceding the 27th the exposed thermometer showed 9° of frost. The change is shown by the temperature of the ground, which five days ago at 1 foot deep was rather in excess of the average for the month, but is now about 3° colder than is seasonable. In the first half of the present month 3 inches of rain fell, but since then only about half an inch has fallen. A few flakes of snow, the first of the season, were noticed on the 23rd, but were almost immediately followed by sleet and rain. During the last three days the wind has come exclusively from some easterly point of the compass, while the air has been drier than of late both during the daytime and at night. The sun shone for only about two hours during the week, and on four days no sunshine at all was recorded.—E. M., *Berkhamsted*.

Treatment of lawns.—Mr. F. W. Burbidge in his welcome article on this subject writes, when referring to "a home-made mixture," to apply same "at the rate of 10 or 12 tons to an acre." This means something like 6 lbs. of a not very handsome carpet per square yard. On the other hand, he gives a mixture weighing 10 cwt. only, which is stated to be sufficient for 5 acres of lawn. Now to treat 5 acres of lawn with the home-made stimulant it would take 60 tons of stuff, which has to be collected, turned over, dried, screened, and spread. All this preparation, with wages at 3s. a day, would cost, I should think, infinitely more under any circumstances than the recipe containing a proportion of chemicals. I have a weed here which they call heal all, or "eel all," which is eating up my lawns, and for which I can find no remedy. It lies so close that the machine does not touch it. It roots at every joint and bears a small purple, cone-shaped flower, like a Clover. The knives of the machine cut off the pods, throw the seed forward, and the machine roller carefully rolls them in. A new lawn I sowed most carefully a few years ago is now disfigured with islands of it. Would nitrate of soda put on in winter destroy it?—J. W. S.

Presentation to Mr. Davidson.—We regret to learn that owing to ill-health Mr. Davidson is about to resign his charge of the seed department of Messrs. Veitch's nursery at Chelsea, after thirty years' service. A pleasing feature of his retirement is the presentation to him by his fellow workers of a handsome timepiece and candle-sticks with an illuminated address, as a token of the esteem in which he is held by those who have so long worked with him.

Swainsonia Veitchi (?).—In reply to our correspondent, Mr. Fulford (page 300, October 19), we have ascertained that the Swainsonia noted as above is not known to the firm whose name it bears. It is assumed that the name is a local one. Without specimens of this and S. galegæfolia alba for comparison we cannot say whether they are identical, but we surmise as much. S. galegæfolia is a very variable species, and possibly there may be two distinct white forms.

Synonymous Grapes.—What is the difference between the Muscat of Alexandria, the Bowood Muscat and the Tynninghame Muscat?—L. M.

*** Mr. Barron, in his "Vines and Vine Culture," classes these as synonymous.—Ed.

Names of plants.—*J. Bennett.*—Your Cypripediums are correctly named; in no case is the appellation superbum warranted.——*C. B.*—Your Eucharises, from the appearance of the roots, have evidently become water-logged. We hope to refer to the subject in a coming issue ——*A. Peake.*—We cannot undertake to name florists' flowers.——*Evelyn.*—The Spindle Tree (Euonymus europæus).——*A Reader.*—1, Ixora javanica; 2, I. Fraseri.——*A. Dacre.*—Vaccinium pennsylvanicum.

Names of fruit.—*C. C.*—1, Worcester Pearmain; 2, Small's Admirable; 3, Betty Geeson; 4, Emperor Alexander; 5, Lord Suffield; 6, Alfriston; 7, not recognised; 8, Beurré Capiaumont; 9, Thompson's; 10, Doyenné du Comice; 11, Easter Beurré; 12, Glou Morceau ——*T. Lester.*—1, Doyenné Boussoch; 2, Glou Morceau; 3, Chaumontel; 4, Glou Morceau.——*J. A. R. Greaves.*—1 and 2, Beurré Hardy; 3, Swan's Egg; 4, not recognised.——*A. G. J.*—1, Apple King of the Pippins; 2, Yorkshire Greening; 3, Beauty of Kent; 4, Pear Beurré Diel; 5, Hacon's Incomparable.——*W. Sangwin.*—Scarlet Nonpareil is Crimson Queening; Duke of Cornwall not recognised; Court Pendu Plat is probably Rymer; the other sorts you send are true to name.——*W. R. L.*—1, Catillac; 2, Vicar of Winkfield; 3, Norfolk Beaufin; 4, White Calville; 5, long fruit Marie Louise; 6, russet fruit Beurré Hardy.——*W. Newton.*—Pear Urbaniste.——*W. West.*—1, Emperor Alexander; 2, Beauty of Kent; 3, Bedfordshire Foundling.——*W. I. G.*—1, Louise Bonne of Jersey; 2, Knight's Monarch; 3, Beurré Hardy; 4, Catillac; 5, Verulam; 6, not recognised; 7, Urbaniste; 8, Baronne de Mello; 9, Old Colmar; 10, Easter Beurré; 11, Beurré Capiaumont; 12, Beurré Diel; 13, not recognised; 14, Marie Louise; 15, Beurré Bosc; 16, not recognised; 18, Aston Town; 19, insufficient specimen.

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"This is an Art
Which does mend Nature: change it rather; but
THE ART ITSELF IS NATURE."—*Shakespeare.*

ORCHARD AND FRUIT GARDEN.

STEWING PEARS.

VALUABLE information has been given in the pages of THE GARDEN for years past on the merits or otherwise of our different Pears, especially dessert varieties, but I feel there still remains a deal to be said in advocating the merits and general usefulness of the stewing varieties. To recommend the planting of a few of these in small gardens may appear at first doubtful advice, but I think it can easily be shown that in such a case they may prove equally as valuable, and certainly more serviceable than some of the best dessert varieties. With the latter, where only a limited number of trees can be grown, a succession of ripe fruit can only be had over a very brief period, and in such cases it is seldom that a proper fruit room is available where late varieties can be properly stored and ripened, with the result that when fruit is most acceptable, the small grower has to buy or go without. Again, dessert varieties, unless well cultivated and close attention given afterwards to gathering and storing the fruit, may prove most disappointing as regards flavour, and a Pear, like any other fruit, cannot, or should not, be appreciated for size and appearance alone. Now I maintain there are several advantages in the stewing Pears over dessert varieties, especially in small collections, which I will endeavour to point out. In the first place they are naturally hardier in constitution, and seldom fail to produce good crops when proper attention is afforded. From the same tree a succession of fruit may be had during the whole winter months, and when these are properly cooked and served they not only surpass inferior and badly ripened dessert varieties, but, what is more, invalids are allowed to partake of them freely when probably all other fruit in a raw state is denied. This alone I consider is enough to recommend the more general cultivation of stewing Pears. Another advantage is the fact that no proper fruit room is required in which to store the Pears, as they keep perfectly in boxes or hampers so long as they are cool and dry.

I have been led to make the remarks on this valuable fruit after seeing a number of collections of Pears at our autumn shows, where stewing varieties fail to meet with the appreciation which I consider their general usefulness merits. Only recently a case in point came under my notice where a good collection of eight dishes was passed over because it contained one of a stewing variety. In this instance it was certainly out of place, as the schedule stipulated they should be dessert varieties, but even had this been allowed and the collection awarded first prize, many, I fear, would have condemned the judgment and looked upon this as a coarse dish, while had it happened to have been a dish of Pitmaston, it would have been passed over without comment, even had the latter been approaching a state of rottenness. I would strongly recommend framers of schedules to allow a dish or two of stewing Pears in the collections, or offer separate prizes, say for the heaviest dish of these, which I think would greatly assist in bringing them more under public notice, and also increase their cultivation. R. PARKER.

Goodwood.

Best flavoured Pears.—In the notes by Mr. Burrell (page 379) the following sentences occur: "Our two best Pears have again been Doyenné du Comice and Beurré Superfin. Possibly the next best, from a flavour point of view, are Marie Louise, Thompson's, and Winter Nelis." Now no grower of experience will question the substantial merits of the two first-named Pears. But whether of the five they should lead for flavour admits of wide differences of opinion. Were I to put Winter Nelis at the head of the best for flavour there would probably be hosts of dissentients. Possibly the larger number of growers would elect Marie Louise as leading for flavour. But my chief objection is to Thompson's being bracketed as equal in flavour with Marie Louise or Winter Nelis. I have tasted Thompson's of good quality, and doubtless it is well grown and finished at Claremont, but I have never yet met with it as in the running for flavour with the other four named. Mr. Burrell's four are all good. It is a mere difference as to which should claim pre-eminence in flavour. I also think it a mistake to include Thompson's among the five best for flavour.—D. T. F.

A new Red Quarrenden.—The very richly coloured and beautiful Apple to which an award of merit was given at the Drill Hall on the 26th ult. under the name of Stubbs' Seedling should take a high place in time in market lists. Naturally it is assumed that all which is said as to its excellent cropping qualities is true. The fruits are exact reproductions of the Devonshire Quarrenden in its best, cleanest, and richest coloured form, but whilst the flesh is soft, sweet, and exceedingly pleasant eating, it is quite white, whilst in the true Quarrenden colour is often strongly diffused through the flesh. If any appellation could fitly describe this new Apple it would probably be Winter Quarrenden, only it is not well to have in fruits names that may lead to confusion. For so highly coloured a fruit, this Apple seems to be unusually late.—A. D.

Colour in Blenheim Orange Apple.—Although it is now some twelve years since I came here, I have never seen what might be called a well-coloured specimen of the Blenheim Orange Apple that had been grown in the midlands. The fruit of it in this district, even on healthy trees, is decidedly smaller than the type and comparatively green in colour, nor does it improve much in this respect after being kept. Other Apples, such as Mère de Ménage, Cox's Pomona, King of the Pippins, and even King of Tompkins County carry a good colour, but Blenheim refuses to do so even on an espalier. The quality also is inferior to that of fruit grown in the south. I have seen Blenheim almost crimson gathered from trees in Essex, Kent, and Buckinghamshire.—J. C., *Newark.*

Pruning illustrated.—In the excellent article (p. 380) by Mr. Fenwick there is a good suggestion. It has often occurred to me that one practical demonstration is worth a dozen dry lectures, and if articles on pruning were illustrated showing the difference between trees that had been well cared for and others that had been allowed to grow wild or had been hacked about in that barbarous manner some people call "pruning," readers would then be able to judge for themselves which was the right mode of treatment. There are quite as many trees spoiled by a too free use of the pruning knife as there are by it not being used at all.—H. C. P.

Pear President d'Osmonville.—This appears to be but little known, yet in its season (November) there is no Pear to surpass it in flavour. To place it equal with Josephine de Malines is to put it very high in the list of first-class favoured Pears. It deserves that position, as the flavour is not only rich and juicy, but the flesh very fine in the grain. In that respect it is the counterpart of the variety just named. The tree makes a handsome close pyramid and on the Quince stock grows freely. The only fault I have to find with it is that it does not fruit freely in a young state, but trees seven and eight years old bear regularly. If I had a wall 10 feet to 14 feet high to furnish, I should plant this variety in preference to Beurré Diel or any other sort that ripens at the same time. President d'Osmonville is just the sort to plant in a strong heavy soil where it can have a wall with an east or west aspect.—J. C. CLARKE.

EFFECT OF SHADE.

NOT till a comparatively recent date did I fully realise the great difference discernible in the growth of plants, Vines and trees that derive the full benefit of all the light and sunshine going as compared with those not so greatly favoured. The effect of sunshine, more especially on young growing plants, is most marked, and although a believer in temporary shade for certain kinds under glass, I am yet more chary of shading than heretofore. Private gardeners of an observant disposition may have fair opportunities for improving their mind and seeing and noting much that the superficial observer fails to detect, but place the same men in the class of houses erected by market growers and they will then soon discover that there is still much for them to learn. As a rule, very much more sunshine and light reach the contents of market growers' houses than is the case with the majority of old-fashioned glazed structures in private gardens. This alone would partially account for the heavier crops on the Vines and fruit trees, and the dwarfer, more free-flowering plants in the former, and it is no discredit, therefore, to the latter if they are beaten in some instances by market gardeners. When from any cause very little sunshine reaches plants their progress is slow and otherwise unsatisfactory. I will take Tomatoes as an instance. If these are planted in rows across a large span-roofed house, with high brick walls and no side lights, all on the shady side, or say that are shaded by the walls for several hours in the morning, they will grow very slowly and feebly indeed. So marked is this slow progress, that I seriously question whether it is not false economy dispensing with side lights in the first instance. Not only does the sunshine where it strikes during the greater part of the day hasten the growth of the plants, but it also solidifies their stems, rendering them more disease-resisting than is the case with those partially shaded. Unduly crowding the plants may not affect them greatly at the outset, but directly they reach a height of 3 feet or so they begin to shade and weaken each other, severe defoliation being but a poor way out of the difficulty. For the future our rows will be not less than 3 feet apart and another foot will be allowed in some positions. The hottest sunshine does not injure Tomato foliage in the least, but I am under the impression a little light shading might save many fruits from being scalded—the fate of tons of Tomatoes last summer. Nor will the fruit set during the dull months of November and December, and those who would have good ripe Tomatoes during January and February must have them set on the plants before November—that is to say before sunshine is a very scarce commodity.

The effect of shade on young Grape Vines is even more marked. Last season a considerable number of newly-struck Vines was planted down each side of a large span-roofed house partly with a view to save the trouble of keeping them in pots and partly with the idea that they would

become well rooted and grow away all the more strongly next season. That the canes of these same young Vines might have been grown to a great length this year I know, but not if they have to contend with Tomatoes for both light and moisture. The latter were of the greater importance, and conditions favourable to the production of heavy crops were, therefore, maintained. My point is this: Wherever the Tomatoes shaded the Vines, and they were very close up to them, the Vines made scarcely any progress, but in all instances where a fair amount of sunshine reached them respectable canes have formed. When, then, private gardeners plant Vines against side walls and occasionally almost underneath a latticed staging, they need not be surprised if the progress they make is unsatisfactory. Even if the start is made with strong, well-ripened canes it would yet be better to assign these a lighter position, as it is very certain they would make better progress and form more serviceable stems if lateral growths could form on them every year. For many years past I have contended against the practice of planting Vines in a narrow space between hot-water pipes and front walls, believing that it would be far better to give them lighter positions, also well away from the pernicious effects of over-heated pipes. Grape Vines will really fruit all over the border of a house, always provided they do not unduly shade each other from the ground upwards, and so they will against back walls if only a fair amount of sunshine reaches them. It is not the Vines that form, or are allowed to form, the most lateral or running growth that are making the most satisfactory progress, but rather those grown in the full sunshine and furnished with a moderate quantity of primary leaves only. On examining a number of young Gros Colman Vines that have not been allowed to form any superfluous growth or other than the leaf or two left on the lateral growth of the canes, I was delighted to find how strongly they are rooted, the surface soil being crowded with root fibres. The border as well as the Vines got the benefit of a large amount of sunshine, and they in addition had water as often as Tomatoes near at hand got it.

Peach and Nectarine trees, again, make extraordinary progress in market growers' houses. They may branch and branch again, and yet if thinned out properly there will be little likelihood of the wood failing to ripen properly and flowering freely. It is possible to plant maidens in the spring of one year and fruit them the following year. A tree of Sea Eagle that I had planted in March, 1894, matured two dozen fine fruits this summer, and several other trees gave comparatively heavy crops, yet they look none the worse for it, and pruning them is quite a pleasure. By far the best results were obtained from trees planted on the east side of a span-roofed house, these getting much more sunshine than those on the west side. The latter have attained to the greatest size, some of the maidens planted during the month named covering a roof area 12 feet by 7 feet, but the wood is not so well matured nor the flower-buds so plentiful and plump as they are on the more favoured trees. All the credit, however, must not be given to the sunshine, but where the rafters on a roof are heavy and thick, and other obstacles are offered to the free ingress of sunshine, it is not to be expected that serviceable trees can be formed so quickly.

When Vines, trees, or plants are grown in the roomy and very light structures mostly favoured by market growers, and now largely superseding the older and more expensive styles in private gardens, they will stand far more glaring sunshine without burning, or even suffering from attacks of red spider, than is the case with the more flimsy-leaved occupants of houses not so lightly constructed. Take Cucumbers, for instance. It is really surprising how much sunshine the leaves will stand without burning if only they have been well hardened previously. Not but that temporary shade is beneficial at times, especially if there is any likelihood of a failure to keep up plenty of moisture in the atmosphere. We are in the habit of associating red spider with Peach trees and Vines when these are not freely syringed during the greater part of the growing season, but my Vine leaves have kept perfectly free of them, and only those Peach trees in a very hot and none too well ventilated corner were infested with spider, yet neither the Vines nor the Peach trees were once syringed all the season. Tomatoes had to be studied, and I prefer to keep these in a dry atmosphere. But if I did not syringe or supply moisture overhead, I did not forget that there was all the greater need to supply abundance of water to the roots. According to my experience, trees, Vines, and plants want, and must have, in fact, twice as much water and liquid food as is required by the same class of trees, Vines, and plants growing in more shady quarters. Being grown in the constantly stirring atmosphere of long ranges of glass and in the full sunshine, the leaves are of the greatest substance, resisting excessively hot sunshine as well as insect attacks far better than those not so exposed, and which also are frequently syringed and kept in a somewhat stagnant atmosphere.

W. IGGULDEN.

THE KEEPING PROPERTIES OF APPLES.

COMPLAINTS are rife as to the early decay of Apples this year, and I have noticed similar complaints in former seasons of plenty when the summers have been abnormally hot and dry. This is owing in part no doubt to the planting of too many early varieties, which makes it difficult to get rid of the fruit in its proper season when the crop is great. There is, however, a reason for fruit decaying quickly after such summers, especially where it is allowed to hang as late as possible on the trees, and that is ripening too early. My experience is that when wanted for long keeping and for flavour, most Apples should be gathered before they become so forward as to part very easily from the trees. I hold that there should be no further delay about gathering the crop when the fruits will part from the wood at the proper place, and that any delay after this tends to spoil their quality and keeping properties. To give a case or two bearing on the matter, I may say that the most highly-coloured and biggest Ribstons that have not been already used and which were almost dead ripe when gathered have become mealy and flavourless, while those fruits which showed less of the red and yellow when gathered are now first rate in flavour and texture, will never become mealy, and will keep for an indefinite period. Fruits of Manks Codlin which were gathered quite early are very firm, of good colour, and there has been no decay amongst them, but had they been left on the trees until they parted freely, I should now have had none left. As it is, however, there will be plenty of this excellent cooking Apple to carry me through November, a late date for Manks Codlin. Of course, we must not err on the other side and gather too soon, or the fruit will shrivel and be flavourless, but there certainly is a golden mean that watchful experience only will teach, and that must be learned by those who would extend the season of the best varieties of Apples.

In his notes on the Crystal Palace fruit show, "A. D." (p. 332) suggests special classes for late varieties as worthy of consideration by the officials of the R.H.S., and with this I cordially agree. I should like, however, to see late varieties exhibited at a show held in December, January or February, and do not think it is too much to hope that such a show should be initiated, for it would do much good in encouraging the planting and proper storage of late Apples. Summer shows rather encourage the growth of early varieties to the exclusion of those which are more valuable. At a winter show we should probably see but few overgrown samples or any grown under glass, but what was lost in display would be more than gained in utility. Apples are more needed in winter than at any other season, and it is just as necessary to learn how to gather and store the fruit as it is to learn how it should be grown.

J. C. TALLACK.

Apple Fearn's Pippin.—This variety is worth growing on account of its free-bearing qualities. With me when the tree has attained a little age it never fails to crop. At one time before the introduction of larger and more showy kinds, Fearn's Pippin was one of the best market varieties. I do not advise its culture for sale, but as a reliable cropper in private gardens of limited extent it is valuable.—S. H. B.

Apple Ashmead's Kernel.—This Apple is worthy of a leading position among good dessert varieties. We have none too many really good late dessert Apples, but this is one of the very best, keeping good well into the spring, at that late period being sweet, firm, and of first-rate quality. The fruits, under medium size, are round, of a light russet colour. If not gathered too soon and stored in a cool place this Apple will keep until May. When I lived in Gloucestershire this was much grown and one of the most liked dessert Apples; in fact, it was always relied upon as the latest dessert variety. It fruited grandly as a standard on the Crab, but the fruits were small. I have it as a bush on the Paradise and it bears well, but the fruit does not keep quite so long. The tree does not like severe pruning. It makes a nice pyramid, and is well worth adding to collections of fruit trees where quality is desired. It forms a good succession to Cox's Orange Pippin.—G. WYTHES.

Apple Jefferson.—At several prominent fruit exhibitions this Apple has been staged in excellent form, its beautiful shape and handsome colour being very striking. I believe the variety is of American origin, and this season appears to have suited it, as I have never seen it so well developed. Some growers speak enthusiastically of its strong and prolific habit and delicious flavour. In my opinion Jefferson has always a peculiar musty flavour that I dislike. I have tasted many fruits of the variety that have been sent me to name, and also at several fruit shows, and this musty taste was present in all. We have many better varieties equally as handsome, prolific, and as well or better flavoured in use at the same time (September and October), and there is no necessity for planters to purchase any variety of doubtful character. What all planters should aim at is a choice selected list of comparatively few sorts.—W. R. H.

Quinces.—It is doubtful if better or more general crops of this fruit were ever produced than has been the case this year. Many trees that have seldom produced a fruit were this autumn loaded with beautiful golden fruit of large size. The finest dish I ever saw was staged at Gloucester fruit show on November 11 by Wm. Sowray, Highnam Court Gardens, near Gloucester. I believe each fruit would scale 1 lb. or upwards, the variety being the Pear-shaped, which is the best to plant for home use or market. There are five or six other varieties; amongst these may be mentioned the Apple-shaped and Meech's Prolific as following the first named. All the varieties succeed well in a damp situation, but, provided the soil is rich and deep, good crops may be expected in those seasons favourable for the trees cropping. Like all other fruit-bearing trees, good culture tells with Quinces. Many failures may be attributed to neglect, such as permitting

the head of the tree to become a tangled mass of growth or starving at the roots. On several occasions I have seen formerly barren trees brought into a fruitful state by a gradual thinning out of the tops and the encouragement of fresh, sturdy, clean shoots that have been left their full length at pruning time. In many gardens the Quinces are simply stuck in in some out-of-the-way spot and are never touched with the knife or given any manure from one year's end to another, for being out of sight or away from the usual routine of work they are forgotten in the press of other work. If annually manured and treated as other choice fruit trees, the results will be of a profitable nature. Sewage and liquid manure are of immense service during the summer months to trees bearing a full crop, the fruit acquiring a colour and clearness in the skin not seen in the produce of those trees that are ill-fed. —W. R. H.

Apple Duke of Devonshire.—This excellent dessert Apple is much more appreciated in the north than in the south and west. As a proof of this, it will be found on examination of the schedules that prizes are always given at the Edinburgh September shows for this variety. Many gardeners in Scotland speak in the highest terms of its productiveness and good quality in that portion of the kingdom. It is worth planting much more frequently in England than has been the case, as it is one of the most valuable Apples we have for private use. As stated, the quality is good and the fruit of a suitable dessert size, keeping well till the end of May. The tree is a strong, vigorous grower, hardy, and does well in all forms of growth. No Apple that I know will keep sound for such a long period after being blown down by gales from tall trees. I have had fruit thus fallen from standards five months afterwards that did not exhibit any signs of decay.—W. G. C.

NOTES ON PLUMS.

In the returns published from growers of these fruits over a wide area how great is the unanimity shown in relation to the fruits' value in various ways. We may well regard the position of the Plum, both as a garden and market fruit, as indelibly established. That in the north there are districts in which the Plum does not thrive outdoors is very probable, and no one would advise culture under such conditions. Happily, however, Plums thrive well nearly all over the kingdom. Still further, although growers express their opinions largely in favour of a deep, retentive, loamy soil, yet the Plum seems to do well almost everywhere, thus showing how very accommodating it is. Most certainly where lime is naturally furnished or is artificially supplied Plums seem to be most at home. Not in all cases, however, is it found advisable to grow the best flavoured varieties in the open ground. Some situations being naturally warm and sheltered enable the best of varieties to do well as bush trees, but generally these are better on walls, where, too, they can be all the more easily protected from birds and wasps. Walls, too, furnish such varying conditions of aspect, that it is easy to have a greater succession than would be possible on open grown trees. When we start with Rivers' Favourite, the earliest of all the best-flavoured section, in July, and continue with other varieties down to November with Coe's Golden Drop and Purple Gage from a north wall, certainly the Plum then becomes a high class and reliable dessert fruit. Of course, the late varieties named will not hang on the trees so long as November, but they will keep well in a cool store for a month at least, and thus they may be had, if a little shrivelled, at least very delicious, till so late a period. To find a choice selection of highly-flavoured Plums for wall culture, it is but needful to turn to the reports recently published and note varieties often mentioned. There seems to be, in fact, no difficulty in selecting twelve varieties all of which give good flavour, especially for dessert, many of them also varying in colour and form. That is enough to satisfy all reasonable requirements. As to cooking Plums, most of these may be grown very well indeed in the open, and it seems a pity that walls should be devoted to the growth of Victoria, Pond's, Magnum Bonum, &c. A select list of half a dozen of the very best for average culture, reservation being made of others that may seem best for certain districts, would comprise Rivers' Early Prolific, Czar, Victoria, Pond's Seedling, Monarch and Archduke. Probably Victoria would never be left out of any selection, yet there remain Orleans, Gisborne's, Pershore, Diamond, Sultan, Mitchelson's, Belle de Septembre and others to furnish other selections, or extend the original one to a dozen varieties. The Plum under all ordinary conditions does well as a standard, because the roots are less gross than are those of standard Apple or Pear trees, and the growth is rarely so robust when grown as bush or pyramid trees. Much pruning and pinching are needful, and sometimes root-pruning is requisite to correct a tendency to produce excess of wood. On walls, however, there is no great cause for complaint as to undue luxuriance unless there be excess in manuring, which is always bad practice. Stone fruits need a good supply of phosphates to assist in forming stones, and possibly constituents of this description may materially help to create high flavour.—A. D.

—— Although many, perhaps the majority of gardeners may have not much to do with Plums as orchard trees, at any rate on a large scale, one and all have doubtless realised the value of this fruit both from a dessert and cooking standpoint, and the special notes that have lately appeared will be of great interest. The value of the Plum in private gardens has been considerably enhanced of late, from the fact that with the introduction of new varieties, a little care in planting can so prolong the season as to secure fruit for both purposes above named at least three months out of the twelve. Having had the planting of a Plum wall some 150 yards long by 12 feet high, and the opportunity of watching the development of the trees to the complete furnishing of the wall, I have been much interested in noting the habit of different varieties and the treatment essential to the early production of a good annual supply of fruit. There is a very great difference in the style of growth, some sorts making a lot of wood, necessitating root-pruning at an early stage, others hardly any annual growth, but bristling with fruit buds right away from the first year of planting. The range of dessert varieties extends from Early Favourite to Coe's Golden Drop and Ickworth Impératrice, and includes besides these the old Green, Oullin's Golden, and Transparent Gages, Jefferson, Kirke's and Denniston's Superb, and the cooking sorts from Early Prolific to Coe's Late Red, including Czar, Victoria, Diamond, Pond's Seedling, and Imperial de Milan, in the order of their ripening. A great many varieties of cooking Plums are hardly advisable. What one wants are successional first-rate croppers of good average size. Of the cropping qualities of the sixteen varieties above enumerated, now that they are well established on the wall, I can write in the highest terms. A failure is only brought about by an exceptionally cold spring and the destruction of the bloom by frost. The blossom of the Plum, it may be noted, is somewhat sensitive, especially if a frosty night follows a damp day, owing to the fact that many of the flowers on spurs face the weather, and consequently retain the moisture in the cup. When this is the case a slight frost is enough to destroy the greater part of the bloom. A double thickness of half-inch mesh fish netting, failing a supply of tiffany, will be found a good spring protection. Denniston's and Pond's Seedling are the least productive of the varieties grown and want root-pruning every third year, whilst, on the other hand, Early Prolific and Early Favourite, Transparent Gage, and Coe's Late Red are all fruit buds, and want feeding to encourage the growth of wood. I planted in addition Washington and Reine Claude de Bavay, but have been obliged to discard them; the one is very shy and the other makes a lot of big sappy wood that is not amenable to root-pruning. If the big roots are cut back the shoots canker badly and die back. The three chief enemies of the Plum are bullfinches, the grey aphis and wasps. Where the first-named are locally troublesome it is useless attempting Plum culture in the open except on a large scale; a few bushes and standards stand but a poor chance against them. Wall trees can be netted, keeping the netting clear of the trees by the aid of a few forked sticks, this being the most effectual means of warding off the attack. The grey aphis is occasionally very troublesome, necessitating frequent syringing to keep the foliage clean. I have found quassia chips at once the most effectual and the safest remedy. For wasps the best plan is an early hunting for, and the prompt destruction of, nests. Traps in the way of bottles are of little use, the insects preferring ripe Plums to the counter attractions of sugared beer. Late Plums have to be netted against blackbirds, or these birds will carry them off wholesale when they have finished up the smaller fruits. On our light, dry soil I find a good surface-mulching absolutely essential in seasons like those of 1893 and 1895; a compost of three parts heavy manure and one of road sidings is used, and is placed rather more than a yard all round the trees, taking the stem as a centre. Thinning is also an essential feature towards the production of good fruit, especially with the heaviest croppers.—E. Burrell, *Claremont.*

—— Although all Plums—as standards, pyramids and bushes, as well as on walls—do remarkably well on our light, brashy soil, with seldom a light crop, and are far better than Cherries and Pears, and even Apples, still I consider extension of orchard planting is not advisable in this district unless there was a prospect of a fresh market, for I have an idea (although practically I know nothing of marketing the crop) that the present supply is fairly adequate for the local demand, excepting for choice dessert kinds; but as these would necessitate special treatment and in some cases wall culture, orchard planting is not applicable to them. Very much, however, might be done by replacing inferior sorts (of which far too many are still grown in this neighbourhood with better varieties, a course I would recommend in preference to adding a large acreage of Plum orchards. Where all kinds are a rly satisfactory it is needless to particularise varieties, but I may mention the Czar, Denbigh, Victoria and an early round black Plum carrying a heavy bloom, much smaller than any of the above-mentioned, but a grand Plum nevertheless (the name of which I do not know) as being—taking one year with another—as productive and useful as most. Of Damsons, the Shropshire and Prune are always satisfactory; the best flavoured are found amongst the Gages (the old one the sweetest), Kirke's, &c., to most of which a wall is allotted. Coe's Golden Drop might safely be included, but here during the last seventeen years it has not had a chance to hang sufficiently late to finish properly, owing to damp and wasps.—J. Roberts, *Tan-y-bwlch.*

FRUIT TREES ON WALLS.

The leaves have now fallen from most trees, therefore pruning and nailing may be proceeded with whenever the weather is mild. It is a great mistake to put men to such work when their fingers are so benumbed with the cold as to scarcely be able to hold the nails, for they cannot do the work satisfactorily, and much time is accordingly wasted. In order that the work may be completed before the sap rises, a good portion ought to be done before the turn of the year. There are many advantages gained by so doing. For example, take a north wall which is often covered with Morello Cherries. These take up much time in nailing, and should therefore be the first to receive attention. With me it is the rule to take a portion of the trees down each season, and to so regulate the shoots as to allow ample

space between them, and where there is a number of trees this takes up much time. If the work is commenced as soon as the leaves have fallen, and proceeded with whenever the weather will permit, it may be finished before severe frost sets in, thus enabling the borders to be manured and dug ready for planting. Early crops are usually grown on south borders, and as the walls facing this aspect are often covered with Apricots, Cherries, and Peaches, such trees are generally left till the severity of the winter has passed, by which time the borders are often planted. A couple of boards should then be used to stand upon in all cases, whether the ground is planted or not. It is the practice in some places to fasten the stout branches of trees to the walls with leather shreds; this is not the neatest form of securing them, neither is it the best, as they harbour insect pests. Tarred twine or yellow willow ties look much better and are equally as strong. Nothing adds so much to the appearance of a well-kept kitchen garden as neatly trained and well-kept fruit trees on the walls. I know from experience that it is no easy task to keep them in order at all times, especially where the staff is limited and much extra work has to receive attention just at the time the trees need it, but whatever is worth doing at all is worth doing well; therefore in large establishments a couple of hands ought to be spared to look after the walls if possible, and the trees will well repay for this extra labour bestowed on them.

It may seem an easy task to prune, but how many of us thoroughly understand the nature of the work, and unless a perfect knowledge be had, often more harm than good is done by the use of the pruning knife. It is useless to remove a shoot from the tree simply because one does not like to see it there. Some other object ought to be in view, namely, the production of fruit or inducing other growths to push where they are required. Many trees are ruined by a too free use of the pruning knife, the only result being a thicket of stout, ill-ripened wood the following season. What is wanted in all fruit trees is well-ripened wood studded with fruit buds. If we take note of the old orchard trees, we there find that Nature herself does the pruning, for it is seldom that any rank, ill-ripened growths present themselves, and if by chance a strong one does appear, if left alone we usually find that in a couple of years it is well covered with flowers. It should therefore be the aim of the gardener to assist Nature by so regulating the growth of his trees, that instead of being barren thickets they are fruitful branches. Nailing, too, is one of those operations that seems simple to look at, yet difficult to do properly, and one that requires a great deal of pains and attention before a person becomes proficient in the work. The operator should not only be able to drive in a nail without breaking it off, but should see at a glance the exact spot where a shred would be of the greatest service. He should also have an idea how long a shred ought to be in order that the shoot thus fastened may have room to expand. It often happens that the beginner puts the nail on the wrong side of the shoot, for, instead of looking which way the shoot is inclined to grow, he drives in, may be, the first nail, and when brought into position by the second shred the other nail is found to be pressing against the wood, and if allowed to remain so, usually brings on gumming or canker, often resulting in the death of the branch, thus disfiguring the shape of the tree. I have often seen it remarked that gardeners ought to be specialists. It is doubtful, however, whether such would remain long at the head where all kinds of produce are required. A good gardener should be proficient in every branch, otherwise he will not be able to dictate to those under him, and should anything go wrong he will not be able to explain the reason. It is no easy task to take down a Morello Cherry or Peach tree and put it back again so that every shoot may have ample space. To commence, the leading branches should be put in their places, and each lot of wood should be so laid in as in no way to appear as though the branches would cross each other in a year or so; at the same time sufficient space must be reserved for laying in the young wood during the summer. H. C. P.

BLACK FLY ON PEACH TREES.

WOULD someone tell me how to rid an early Peach house of black fly? The trees are started early in February.—SUBSCRIBER.

*** Black fly on Peach and Nectarine trees is a great scourge and not easy of eradication. Where it was troublesome this year it will, unless somewhat drastic preventive measure are taken, be equally as numerous, perhaps more so, next season. Sometimes what are known as viviparous females survive through the winter, and, in any case, eggs are plentiful enough in a variety of positions on and off the trees at the present time, and only require the genial warmth of spring or a forcing house to hatch out perfect insects. After trying a variety of remedies, including hand-dressing of every portion of the trees with insecticides and a general cleansing of the house with only partial success in each case, I tried the effects of a petroleum dressing, with the result that black fly was no longer a bugbear. I should advise "Subscriber" to first give the woodwork and glass a thorough cleaning, also dressing the walls with hot lime-water made sufficiently thin to admit of its being well worked into all the crevices. This being done and the trees duly pruned, the next proceeding should be to clear out all rubbish and also remove the surface soil of inside border, many insects and eggs probably going with this. The trees ought then to be syringed with the petroleum mixture in preference to any more cumbersome method of dressing the trees. Use the water heated to 120°, and in each 3 gallons of this dissolve a lump of soft soap about the size of a moderately large hen's egg, prior to adding 6 ounces (to be measured with an ordinary 6 ounce or 8-ounce medicine bottle) of petroleum or paraffin, as generally, but erroneously termed. Apply while the water is hot, or otherwise it will not be nearly so effective, and keep the petroleum forcibly mixed and from floating on the surface either by returning every second syringeful into the receptacle or else by keeping two syringes going, one drenching every part of the trees and the other returning into the can. The petroleum mixture should be used very freely, as it is cheap enough, while if it does run down into the soil it is more likely to do good than harm. If a few eggs or insects escape and duly show on the trees, they must be met with a dose of tobacco powder, or otherwise they will soon be as numerous and injurious as ever. The petroleum mixture is also the best remedy that can be tried for brown scale, another very troublesome pest and only too common on Peach trees. If one application does not thoroughly cleanse a tree of this, give another, and if done before the buds are bursting, no harm whatever will accrue to the latter. The old surface soil of border containing the roots of trees that have been stunted in growth, owing largely to insect pests, should be replaced by a rich top-dressing.—W. I.

Apples in Scotland.—Many Apples are found in northern parts of Scotland bearing capitally most seasons, while the same varieties may be seen poor in the southern parts of the country. But there are some varieties which are found to do well in nearly every district, notably Lord Grosvenor (some reference has been made to this most useful variety lately), which becomes a favourite wherever it is known. I planted a few young trees of it some years ago. They began to yield the year after they were planted, and never fail to bear each season heavy crops of large fruit. They are not of fine form, but that is of little consequence. Another Apple, always handsome, is Golden Spire, which is a free cropper in an untoward position, such as Grosvenor is in, and on cold and damp soil. These along with Seaton House, the freest bearer I know and valuable for cooking, give supplies of fruit from September till April. Then Northern Greening and Yorkshire Greening finish the Apple season. Sandringham has fruited freely for two seasons past. The fruit is very handsome, large, and keeps late.—M. TEMPLE, *Carron, N.B.*

Apple Warner's King.—I am of the same opinion as Mr. Burrell (THE GARDEN, page 379) in regard to Warner's King Apple. For several years I grew it at Bickley, but often it would not keep longer than the middle of October. If by chance I could keep enough for a dish for exhibition during the first week in November, some of them have gone bad by the time a two days' show was over. This is too often the case with many of the big spongy Apples seen at our big autumn shows. No one would hesitate giving Yorkshire Greening the preference over Warner's King, but even Yorkshire Greening must take second place when such very good sorts as Lane's Prince Albert, Blenheim Orange and Wellington are to be had. I would, if restricted to a certain number of Apples, sooner plant Alfriston than Warner's King, for it has three good qualities in that it bears freely, keeps well, and is of large size.—J. NEIGHBOUR, *Copped Hall Gardens, Epping.*

PEAR FLEMISH BEAUTY AND ROOT-PRUNING.

THIS Pear, referred to by "J. C.," I think is more common in Scotch than in English gardens. In some districts it does excellently as a standard. Many years ago I took charge of a garden in a Scottish midland county in which some Pears were not worth their room apart from walls. Flemish Beauty was among them—a beautiful pyramid. The fruit trees of every kind were grown by my predecessor in excellent form, and I do not know where such training is to be seen now. Training is not the only art conducive to success. The pyramid referred to was nearly a perfect specimen, about 9 feet high and 7 feet at the base. The fruit ripened badly and was all cracked. I started a "green" hand on to get the soil away from the roots in order to replant the tree above the surrounding level. My assistant (in my absence) made short work of the lifting; he cut off the roots nearly close to the trunk, and thus the tree was easily lifted. My first thought was to burn it, but I relented, and gave the almost rootless stump a chance, replanting on a bed of lime rubbish, over which was placed capital turfy loam, the tree being staked and mulched to keep out frost; this was in November. I looked anxiously to see how this Flemish Beauty behaved the following spring. It did not die, but developed very few leaves. The following year some growth was made, and the dormant buds flowered freely and set a good crop of fruit, and there was no cracking. Every year afterwards, while this tree was under my charge, it produced excellent crops of very fine fruit, deeply bronzed on the side next the sun. The late Mr. Thomas Osborn spent a day among Apples, Pears and Plums, &c., with me once a year as he travelled northwards. He always examined the Flemish Beauty, and told me repeatedly that he never saw the fruit finer in the Fulham district. I have lately received a Pear of this variety to name for a friend: it was from a wall, however, and a good specimen. I would be glad to hear how it behaves in other Scottish gardens. Through the reminder of "J. C." I have ordered two trees for a wall, but have no intention of putting them to the severe test that my young journeyman did the handsome pyramid. When one speaks of root-pruning it should not mean the cutting off ruthlessly of roots that are doing good service to the tree (as is often done), but removing or shortening those which are growing downwards into cold, damp or inert soil, and such as may be causing too much late growth which cannot become matured and does not form fruit buds instead of wood growth. Of course, trees in gardens to remain dwarf require attention at the roots to prevent them from occupying too much space; while in orchards they may be allowed to grow freely.

Carron, Stirlingshire. M. TEMPLE.

Flower Garden.

A NEW JAPANESE WINTER CHERRY.

(PHYSALIS FRANCHETTI.)

Everybody knows the bright scarlet fruits of the Winter Cherry, and the wonder is that it is not more widely cultivated for decoration, as



Physalis Franchetti, showing full sized fruit.

its brilliant red fruits dry well and make charming winter bouquets along with silvery-fruited Honesty, the plumes of Pampas Grass, the pheasant-tail-like inflorescence of Apera arundinacea, the silky Fan Grasses (Eulalia), or the heads of the Sea Hollies or Eryngia, such as E. giganteum (silvery grey) or E. Olivierianum and E. planum, both of an exquisite steel-blue shade.

One of the most remarkable of all the new introductions from Japan, however, is P. Franchetti, which has fruits as large as duck's eggs and of a charming shade of red or orange-vermilion. As seen in the sunlight or by lamplight the inflated calyces are most brilliant, and being translucent they look exactly like miniature fairy lamps or diminutive Chinese lanterns as seen amid their own soft green leaves or as tastefully arranged along with other suitable green foliage.

This new variety was introduced direct from Japan two years or so ago by Mr. J. Veitch, of Chelsea, and it has been growing and fruiting most luxuriantly this autumn in the nursery trial grounds at Langley, where it has been much admired. The plant likes a deep, rich, sandy soil, well tilled so that its rhizomes can run freely underground, and the result is a little forest of stalks from which droop and glow the little balloon-shaped fruits during the later months of the year. A bed on the Grass devoted to these two varieties of Physalis, viz., P. Franchetti in the centre and a belt or circle of P. Alkekengi around the outside, would form a novel feature in autumn that would not easily be forgotten. In Japan the fruits of both these red-fruited kinds are utilised in the native cookery much as we use the nearly related Lycopersicum or Tomato, but it is as decorative plants that they best deserve attention in our northern gardens. Both are perfectly hardy herbaceous plants, and once well planted, require no further attention except a rich top-dressing over their roots every autumn or winter so as to ensure robust growth and larger fruits.

A large bed or border of these forms of Physalis would prove a most novel and interesting feature in all public parks and gardens, and in many private establishments the brilliant fruits would be most acceptable for all kinds of autumnal and winter decorations.

F. W. Burbidge.

Cordyline indivisa in flower.—Mr. Dorrien Smith has bloomed the true Cordyline indivisa in his Tresco garden, and has just sent me part of his home-saved crop of seed. It is the broad-leaved variety we rarely see in greenhouses, leaves 3 feet to 4 feet long, 3 inches to 5 inches wide, olive-green, with fine vermilion-red lines. It grows in the open ground at Tresco Abbey, and when I was there in April it was in flower, and he said it should be photographed. The pendulous flower-spike is quite different from that of all other species of Cordyline I know.—F. W. B.

Belladonna Lily in Norfolk.—At page 386 J. Crook alludes to the thriving condition of this beautiful Lily at Didlington Hall, and informs us that the plants are growing in a border at some distance from a south wall. This latter fact no doubt accounts for the flourishing condition of this Lily at Didlington, as at Gunton, in the same county, Mr. Allan tried for years to grow it in a similar position, but failed. Several years since, however, he made a narrow border about 18 inches wide and a foot deep close up to the wall of the plant stove. The hot-water pipes inside the stove kept the border always in a warm state. Here the Lily has grown vigorously and bloomed freely, the flower-stems being very strong. When at Blickling last autumn I saw the same plan had been adopted, and Mr. Oclee's plants were blooming freely.—J. C.

CIMICIFUGA SIMPLEX.

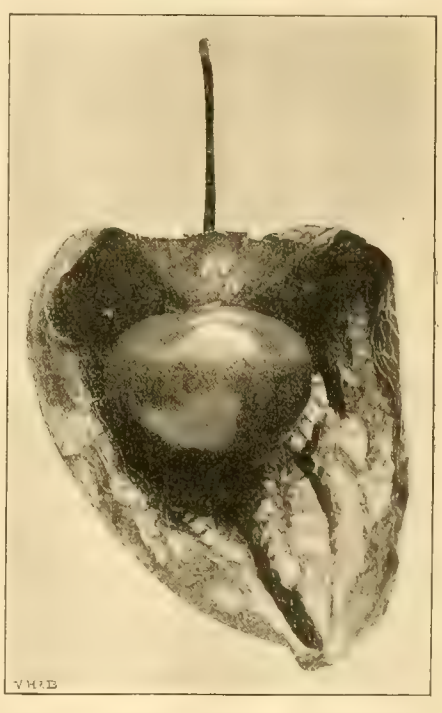
In a recent note on this plant I referred to "Index Kewensis" as an authority for what I said. For the last twenty years I have been trying, with more or less success, to get the nomenclature of hardy garden plants, if not correct, at least consistent in England; and I bought that expensive work—"Index Kewensis," which is only just completed—with a view to help in this direction. I believed that the plan of the work was to give the synonyms or obsolete names of species in italics, whilst the name authorised at Kew is printed in upright square type; and I found the name Cimicifuga simplex (Wormsk.) printed in italics and reference made to C. fœtida (Linn.) printed in square type. I am now told on high authority that C. simplex is the correct specific name, and that the "Index Kewensis," is no authority for the correctness of any name, and am referred to a passage in the printed address of the director of Kew to the botanical section of the last meeting of the British Association, which says of "Index Kewensis:" "It is a mistake to suppose that it is anything more than the name signifies, or that it expresses any opinion as to the validity of the names themselves." The address goes on to say that there is "one species of Fimbristylis of which there are 135 published names under six genera." I conclude that, as far as "Index Kewensis" is concerned, all the 135 are of equal authority, and those who possess the plant may take their choice. Amateurs, I am afraid, generally suppose that synonyms of species are limited to one or two in each, and hardly understand fully the perplexities of botanists. As regards the particular plant about which I wrote—C. simplex—I am told that though it has lost its distinctive simplicity, which De Candolle considered its only special character (we all know that plants thus change their character in cultivation), it is really a distinct species from C. fœtida (Lin.), with which it was formerly confounded. I make this somewhat long statement because I am really sorry to have questioned a name which was deliberately and purposely retained and authorised at Kew. The authorities at Kew will, I am sure, admit that they have often exhibited in the hardy beds plants under the names sent with the plants by nurserymen, and that those names have often proved incorrect; but it is important to know that names which seem to be preferred and adopted in "Index Kewensis" may also be incorrect, and that the hand list of herbaceous plants alone contains the names which nurserymen and amateurs will be safe in adopting.

Edge Hall, Malpas. C. Wolley-Dod.

P.S.—Some time ago, in a note headed "Telekia formosa," I stated that Buphthalmum grandiflorum and B. salicifolium appeared to be made synonyms in the "Kew Hand List." The error was mine, and I find the names are printed quite correctly in that list.

NOTES ON HARDY PLANTS.

Ostrowskia magnifica.—The propagation of this plant may be by young growths and by root division. In the case of young growths these appear early and in considerable numbers in the case of old plants. Bare down to the roots and take the growths when 2 inches to 4 inches long with a morsel of the tuber as you would Dahlias, be sure and let the milky sap dry up, then treat as Dahlias. The root-dividing should be done in



Physalis Franchetti, cut in half to show berry.

July or August, by which time the plants are turning sere. From the unusual form and character of the roots, their division for increase is exceptional. The roots are very thick, succulent and contorted at sharp angles, and the bulky points, which may either have gone deeply down or come close to the surface, are capable of being taken for the vegetating ends. It is essential to

so deal with the roots that there can be no mistake as to which end before being cut was in the direction of the crown of the parent stock. When I take up the roots I cut the thick roots into pieces the size of one's finger, and mark the upper end at once by a little slit. All the pieces are placed in a dry place until the milk dries up and the cut parts heal, then they are stuck into dry sand ninepins fashion with the slit ends upwards, the box placed in a sunny frame and near the glass for the remainder of the summer. The object of this is to secure the roots against decay from damp, to get possibly a little tuft of fibre at the bottom, but chiefly rudimentary crowns. The latter, by the aid of the strong light and long days, soon appear round the exposed cut in the form of wart-like excresences. These are usually ready to put into 3-inch pots by October, but if the little crowns should become white and soft, pot immediately even if a month earlier, as they otherwise would not be fit for the deep planting in the open, which some might prefer to do rather than pot, and even for potting the too advanced baby crowns would be liable to rot. Such young stock should be kept on the dry side till growth fairly sets in in spring, and even old plants are better for being kept so.

Primula suffrutescens. — This rare and curious species, distinct from all others in the way indicated by its name, is, provided you have a fair-sized old plant to operate upon, of quite easy propagation if dealt with at the right time, and that is when growth has stopped and the leaves become firm. Its leaves are of course firm in spring, but that is not the best time, because the new thick roots are not due to push at that season. Autumn (September or October) is the time, and if the cuttings are made with a piece of the stout and almost woody stems, and inserted in sand and kept damp, roots are emitted in two or three weeks. The young plant may either be left in the sand all the winter or potted in a firm compost of chopped turf and sand. It is necessary to keep the collars dry. Pot plants can be easily kept in a cold frame. In the case of plants in the open, cover with a sheet of glass. Those who know the habit of the species will understand the why and wherefore of this, as, owing to the tender and thick succulent stems having been brought artificially close to the surface, rot would ensue if damp lodged at those parts. In the normal state of a mature specimen all the green parts are terminal on woody forked stems. Beyond a doubt mature plants can stand our worst winters. J. Wood.

Woodville, Kirkstall.

A dwarf Begonia.—Under the name of Begonia Vernon nain "Pierre precieuse" there is an illustration in the French journal *Le Jardin* of an extremely dwarf form of the coloured-leaved variety of B. semperflorens. As B. Vernon has already attained considerable popularity as a bedding plant, in all probability its dwarf form will be much sought after for the same purpose. In an article accompanying the illustration it is recommended for various purposes, among others that of carpet bedding, so that it must be indeed of low growth. To secure uniformity, it is recommended to propagate it by cuttings or division, as by either method a considerable number may soon be obtained, and it is feared that seedlings will show a certain amount of variability. This dwarf variety is not yet in general cultivation, but is announced for distribution in the spring of 1896.—H. P.

Leaf sweeping.—At this season the main task of the gardener consists in sweeping up the fallen leaves from paths and lawns, and the ordinary workman enters upon an almost insensate struggle to restore neatness to Nature. Personally, I like a certain amount of disorder in our gardens in the autumn, for the colour of the leaves, their rustle in the wind, their pleasant odour, and the moral lessons they may teach are all pleasant or suggestions to the contemplative man, who sees with Homer that—

> The race of man like leaves on trees is found—
> Now green in youth, now withering on the ground.

Besides, in many cases the natural dead leaf covering is of the greatest use to plants, whose roots are protected by it against their winter trials. Most of the sweepings in shrubberies and the rougher parts of the pleasure ground are not only a waste of labour and money, but actually injurious. At the same time there comes a time, especially in a sudden leaf fall like that of 1895, when the garden proper must have its paths and grass swept. In carrying this process out we are far from having exhausted the resources of civilisation. The gardener enters upon his leafy war with the old broom or besom which has come down to us from antiquity. We have lawn mowers, garden hose, and many other modern mechanical helps, but the tedious and wasteful broom still rules our autumn garden. The purport of this note is to ask why our horticultural instrument makers do not take up the problem of a mechanical leaf sweeper, something on the principle of an enlarged carpet sweeper, with a box behind into which a revolving wire brush in front should brush the leaves. Not only would such a machine save immensely in labour, but it would in small places save the grass plot from an immense amount of injury now annually inflicted upon it by the vicious work of the broom—often a veritable besom of destruction. With a leaf sweeper going its rounds once a week we could still in moderation enjoy our autumn feast of leaves, and at the same time give the gardeners time for their proper work, which incessant leaf sweeping most certainly does not.—J. I. R.

Ferns.

GOLD AND SILVER GYMNOGRAMMAS.

While there are two or three Adiantums and a few Nothoclænas and Cheilanthes with foliage either golden or silvery on their under side, the Gymnogrammas are, according to garden classification, much more numerous and offer also a much greater variety of colours. Botanically speaking, nearly all the Gold and Silver Gymnogrammas in cultivation are represented by two species only, for Hooker and Baker in their "Synopsis Filicum" bring nearly all the forms now found in gardens under the denomination of varieties of two species only—G. calomelanos, a West Indian species, and G. tartarea, a native of Tropical America. According to Baker's theory, these two species, which in their natural state have their foliage of a silvery nature, are very variable, including as they do a variety of forms which are connected by very gradual shades of colour of the powder with which their under side is covered, and which forms their most attractive as also their most distinctive character. Whether such plants as G. chrysophylla and G. Massoni, for instance, whose fronds have their under side respectively of a bright and of a deep yellow, are simply varietal forms or species proper is of little import so far as garden purposes are considered, for they are from a decorative point of view totally distinct and essentially different, although similar in habit and in botanical characters to the typical species with which they are said to be so closely connected, and, wrongly or rightly, they are usually considered as distinct species. Sometimes, in fact, plants are found which bear fronds suffused with white and yellow powder at the same time. This form of dimorphism in colours may frequently be observed in forms derived from the calomelanos type, which also sometimes produce fronds provided with the usual coating on one half, whereas the other portion is completely destitute of the coloured powder. Such instances, however, can only be regarded as curiosities. The same remark is also applicable to the forms with forked or crested fronds, which under cultivation Gymnogrammas have a peculiar tendency to produce; of these, G. Parsonsi and G. Wettenhalliana are excellent examples.

The genus Gymnogramma, so far as the gold and silver representatives of it are concerned, is almost exclusively composed of plants indigenous to hot climates, with foliage more or less finely divided, and requiring under cultivation a minimum temperature of 55° in winter. It may be safely said that all Gymnogrammas are very ornamental, and that the majority of them may be grown with success in hanging baskets, in which position they show the beautiful colours of their foliage to perfection. Wherever it is practicable this way of cultivating them is really the most suitable, as these plants are fond of light and also of an atmosphere drier than that found in the ordinary fernery or warm plant house. Owing to their great dimensions and robust growth, some kinds, however, are more successfully grown in pots. As a general rule and with few exceptions, Gymnogrammas should be potted firmly in a material of a light and permeable nature made up of two parts of fibrous peat, one part of leaf-mould, or if this is not readily procurable, the same quantity of chopped Sphagnum Moss may be substituted, and one part of silver sand. As they not only suffer from the effects of watering overhead, but as under such circumstances they present a wretched appearance through the white or yellow meal being easily displaced by the slightest sprinkling of water over their foliage, these plants when grown in pots should not be mixed among other Ferns, but be kept by themselves and out of reach of the water from the syringe. Although particularly fond of a dry atmosphere, Gymnogrammas suffer if water is not freely administered at the roots, and lax treatment in this respect is often fatal to them, or, at all events, accounts for the poor state and diminutive size in which one frequently sees them in general collections, as they invariably take months to recover from one day's drought when they are not killed outright by it. They grow very well and get a much better colour if kept without, or with only very light shading, the light never being too much for them, provided they have been accustomed to it from the first, and that good ventilation is provided in the house or part of the house devoted to their culture. The propagation of Gymnogrammas is readily effected by means of their spores, which are produced in great abundance, even in young plants, and which germinate freely and make handsome specimens during the course of one year.

The following are the most distinct and the most beautiful species and varieties known in gardens, with foliage either golden or silvery underneath:—

Golden Varieties.

G. Alstoniæ.—This remarkably handsome plant, of garden origin, appears to be a variety of G. chrysophylla, which it resembles in general aspect. The peculiarity, which greatly enhances the beauty of the plant and which renders it distinct from any other form, is the way in which the greater part of its leaflets is turned upwards and gracefully incurved, making the upper side of the fronds appear as if dotted all over with little golden globules. It is also an exceedingly good grower and reproduces itself fairly true from spores.

G. chrysophylla. — This beautifully coloured plant is a native of South America and the West Indies, being found abundantly in the

islands of Martinique and San Domingo. Its handsome fronds, produced in great abundance from a closely-set crown, are usually from 18 inches to 24 inches long, sometimes longer, including the stout, round, chestnut-brown stalks on which they are borne, and which keep them in a nearly erect position, giving the whole plant the appearance of a huge golden shuttlecock, and showing the bright yellow colour of their under side to great advantage. In reference to this plant, E. J. Lowe, in his extensive work "Ferns British and Exotic," vol. i., p. 3, says: "Of all the Ferns cultivated in Great Britain, perhaps no species is so universally admired as Gymnogramma chrysophylla, the king of the Gold Ferns."

G. DECOMPOSITA.—Although it has been reported and described as having been raised in the late Mr. Gair's collection in Scotland, this strong-growing species, which by its habit as also by the nature of its fronds, which are fully 24 inches long and 12 inches broad, suggests a natural hybrid between the lovely G. Pearcei and the golden G. chrysophylla, is given by Baker as a species "probably Andine," and by Nicholson as a "native of South America, introduced in 1873." Whether a species or a variety, G. decomposita is a remarkably handsome and totally distinct Fern with somewhat the habit of G. pulchella, but when in a young state much more finely divided and scantily furnished with powder. This powder is white or nearly so, but as the plant gets older it becomes of a bright yellow colour and covers the stalks, but seldom extends to the leafy portion of the fronds, in this respect resembling the finely-cut G. Pearcei. Its fronds are four times divided nearly to the midrib and furnished with triangular pinnæ, the basal pair being the longest; these pinnæ are divided into small pinnules, which are again split into several minute finger-like lobes, giving the whole plant a finely-dissected appearance. It may be noted here that this lovely plant reproduces itself freely and true from spores.

G. GRANDICEPS.—This is perhaps one of the most striking of all the known Gold Ferns. Its fronds, which sometimes reach 18 inches in length, including their stalks, are spear-shaped and three times divided to the midrib; their distinctive character, however, lies in the broadly tasselled nature of the drooping apex. The underside is densely coated with a powder of a pale yellow colour, and the segments, instead of being rounded or blunt as usual, are conspicuously pointed. This beautiful form is best propagated by the division of the crowns, although it is a slow process, as seedlings seldom reproduce the plant in its true characters

G. LAUCHEANA.—The fronds of this beautiful and symmetrical form, of dense habit and smaller dimensions than G. chrysophylla, from which species it is thought to be issue, are quite triangular in shape, and are borne on stout stalks only sufficiently long to give them a gracefully arching appearance. They seldom measure more than 18 inches long, and their under side is of a particularly bright and uniform golden colour, which increases in depth as the fronds become older. This very variable variety has produced several forms, and notably the one called gigantea, with fronds much longer, but not triangular.

G. L'HERMINIERI.—According to Lowe, this uncommon Gold Fern, which undoubtedly is the prettiest of the many light forms of G. chrysophylla, is a native of Guadaloupe, one of the largest of the Caribbee Islands. On account of its slender habit and its light colour, the general appearance of this form is very much that of a plant half way between G. sulphurea and G. chrysophylla, as its fronds are much more slender and their leaflets more finely cut than those of the latter species, while their under side is of a much darker colour than that of the fronds of G. sulphurea.

G. MARTENSI.—E. J. Lowe states that Link considered this Fern, which he gives simply as a native of South America, as a hybrid variety between G. calomelanos and G. chrysophylla; also that under similar cultivation the latter species is less in size, more triangular in form, has the pinnules more expanded, and is not so sharply pointed at the extremity of the pinnæ. The fronds of G. Martensi are 18 inches to 24 inches long, twice divided to the midrib and furnished with spear-shaped leaflets, the segments of which are conspicuously and sharply toothed; the colour of their upper surface is a dull yellowish-green, whilst beneath they are profusely covered with a rich deep yellow powder.

G. TRIANGULARIS.—This is commonly known as the Californian Gold Fern, being, according to Eaton, very common on rocky hills nearly throughout California, extending northward to Oregon and southward to Ecuador. It is a very pretty and thoroughly distinct species with elegant triangular little fronds about 3 inches each way independent of their slender, dark chestnut-brown, glossy stalks 6 inches to 12 inches long and produced in tufts. The fronds are of a somewhat leathery texture, smooth, and of a dark green colour on their upper surface, while their



Gymnogramma Laucheana at Warley Place. From a photograph by Miss E. A. Willmott.

under side is densely coated with a powder which varies from deep orange to sulphur colour, and occasionally even to white. The temperature of a cool greenhouse suits it best all the year round.

G. MASSONI.—As a Gold Fern, and also as a decorative plant, this Gymnogramma, the origin of which is apparently unknown, is very remarkable on account of the length of its fronds, which are spear-shaped, handsomely golden beneath, somewhat loose, and of a pendulous habit, making it an excellent plant for hanging baskets of large dimensions.

G. MAYI.—In habit as well as in general aspect this variety, of garden origin, is very similar to the better-known G. peruviana argyrophylla, from which no doubt it is issue. It is, however, of a more robust constitution, and the farinose powder with which its fronds, more massive than those of the above-named species, are covered on both surfaces, instead of being a pure white, is of a light sulphur-yellow, and is also noticeable, though in less quantity, on the entire surface of the stalks.

G. OCHRACEA.—This Gold Fern, which is by Baker considered as a variety of G. tartarea, from which it differs essentially through the bright yellow colour of the under side of its fronds, is a native of Peru, and probably the most accommodating of all the Gymnogrammas as regards temperature, as it succeeds equally well in a greenhouse or in the stove. Its fronds, which are also produced in greater abundance than those of most other species or varieties, have their pinnæ very regular, closely set, and only the lowest ones are distinctly toothed; they are of a bright shining green above, which forms a very pleasing contrast with the yellow colour of their under side.

G. PARSONSI.—This beautifully crested form, of garden origin, is of comparatively dwarf dimensions, its fronds, densely coated with bright golden powder underneath, seldom exceeding 12 inches in length. They are of upright habit and particularly handsome and interesting, through their extremities being formed into a broad, but finely-divided tassel, while each pinna terminates in a crest, becoming smaller as it reaches towards the base of the fronds. It should be remarked here that it is very liable to damping off, through accumulation of moisture in the tassels and crests of the fronds during the winter, when it must be kept in a particularly dry place and as close to the light as possible. It is undoubtedly the most popular of the crested forms of golden Gymnogrammas known, because it is easily reproduced from spores, although it is somewhat variable in its mode of cristation, producing plants with fronds whose crests are of a more or less flattened nature; whereas those of G. Parsonsi type form a regular golden tassel at their extremity.

G. WETTENHALLIANA.—This very distinct variety is of garden origin. In good varieties the fronds, besides having their extremities ornamented by a large corymb, bear also dense crests at the points of all their pinnæ. The colour of their under sides is pale sulphur or lemon, sometimes paler still, as seedlings of it vary very much in colour and also in cristation.

G. SULPHUREA.—A pretty, small-growing species, native of the West Indies, and one which is easily distinguished by the delicate cutting of its fronds, as also by their soft texture and their decidedly spear shape. They seldom exceed 9 inches in length and 3 inches in breadth. The pinnules are pale green above and profusely covered beneath with a brilliant sulphur-yellow farinose powder, of which there is also an occasional sprinkling on their upper surface. Unfortunately, this pretty little species is more difficult than other Gymnogrammas to grow from one year to another, and should be kept during the winter months as close to the light as possible and comparatively dry, or at least "on the dry side" at the roots.

G. VEITCHI.—A beautiful variety of garden origin, considered as being a hybrid between G. chrysophylla and G. Pearcei robusta. It is undoubtedly one of the handsomest Gymnogrammas known, having the finest cut pinnules of all the golden species and varieties known; it is also the most robust in habit and of a very light and graceful aspect. Its tufted fronds, which attain 3 feet to 4 feet in length, are elegantly arching all round; their stalks, somewhat slender and of a chestnut-brown colour, are covered with sulphur-yellow powder, which extends to their leafy portion. The pinnules are cut into segments so fine as to impart to the fronds a lace-like aspect.

G. CALOMELANOS.—This very handsome and extremely variable species, native of the West Indies and also of the Tropical West African Islands, is one of the largest-growing kinds of gold and silver Ferns. Its fronds, abundantly produced and bending outwards, often measure 2 feet to 3 feet in length and 1 foot in breadth. Their spear-shaped leaflets, often cut down quite to the midrib, are closely set and divided into distinct toothed pinnules of a somewhat leathery texture, dull green on their upper surface, but entirely covered underneath with creamy white farinose powder.

SILVER VARIETIES.

GYMNOGRAMMA ARGENTEA.—A very pretty species, of dwarf habit, with elegant little fronds borne on slender, glossy stalks 3 inches to 6 inches long and of a chestnut-brown colour. Their leafy portion, divided into leaflets 3 inches to 4 inches long and 2 inches broad, is of a soft, papery texture. Their under side is coated with a white powder, while the spore masses are of a peculiar pale brown colour. It is a native of Natal and the Mascarene Islands and a very rare plant. A variety of it, named G. aurea, has its fronds coated with yellow powder; this is found in Madagascar, Bourbon and Angola.

G. PEARCEI.—This exceedingly elegant species, native of Peru, is entirely distinct from all other Gymnogrammas. Its beautiful and most elegant fronds are more finely divided than those of any other species or variety. The fronds, which are borne on glossy stalks 6 in. to 9 in. long and of a bright chestnut-brown colour, are of a thin, papery texture and of a dark shining green colour above, while the under side is sparingly dusted with white powder, which extends along the stalks and to the crown of the plant. G. Pearcei has, unfortunately, become very scarce in collections.

G. PEARCEI ROBUSTA.—Like the typical species, of which it is an accidental seedling of comparatively recent production, this variety has somewhat triangular-shaped fronds of a dark green colour and very finely cut, but these are narrower at the base and more elongated towards the summit; in other respects it is larger in all its parts and of a much more robust constitution. The under side of the fronds, the lower portion of their stalks, and the crown itself are covered with white powder. It also differs from the typical plant, which usually has but one single crown, in forming, even when in a young state, a tuft of crowns, from which many stalks arise, giving the plant a denser habit and the appearance of being better furnished than the typical species. This variety has only recently been known to produce spores; its propagation, therefore, is limited to the division of the crowns, which operation is safely performed in the early part of the year.

G. PERUVIANA ARGYROPHYLLA.—This is undoubtedly the best and most distinct of all the known Gymnogrammas with silvery foliage, and differs from most other known kinds by having its massive fronds heavily dusted on their upper as well as on their under surface with snow-white powder. Its splendid fronds, 24 inches to 30 inches long and about 15 inches in their broader part, are comparatively broad and blunt. It is of excellent habit and of remarkably good constitution, and on a specimen in good health the thickness of the white powder on the upper surface of its fronds is such that nearly all traces of green have disappeared and the plant presents a glaucous or bluish white appearance; but it should be borne in mind that on that account it is more likely than any other sort to suffer should its foliage get wetted over. It possesses the property of reproducing itself true from spores.

G. SCHIZOPHYLLA.—A very distinct species, native of Jamaica, which, though but slightly provided with white powder, is, however, one of the most attractive of Ferns through its elegant contour, its graceful habit, the delicate cutting and the pleasing colour of its foliage. Its delicate-looking fronds, which are produced invariably from a single crown, are borne on slender stalks of a reddish brown hue; they are from 18 inches to 24 inches long, about 6 inches broad, and are elegantly arched. It will thus be seen that it is one of the best and prettiest Ferns adapted for growing in hanging baskets of medium dimensions. This species also differs from all other known Gymnogrammas in its being proliferous, its fronds being forked towards their extremity where a young plant is produced; this roots very freely when pegged down on a mixture of peat, chopped Sphagnum and sand in about equal proportions.

G. S. GLORIOSA.—This beautiful variety, of garden origin, is of much more robust habit than the typical plant, and produces from a central crown fronds of much larger dimensions and of a peculiarly feathery nature. It reproduces itself true from spores, which are abundantly produced, and also from young plants which are found growing not only at the extremity of the fronds, as in the species, but even at the end of each leaflet.

G. TARTAREA.—This very distinct and deservedly popular species, which is often found in gardens here and invariably on the Continent under the name of G. dealbata, is a native of Tropical America and a thoroughly distinct plant. It is a strong grower, its fronds measuring 24 inches to 30 inches long and sometimes 12 inches broad, borne on firm stalks of a dark chestnut-brown colour, and 6 inches to 12 inches long. The fronds are of a dull green colour on their upper surface, but entirely covered on their under side with a thick coating of snowy white farinose powder, with which the abundantly produced and conspicuously black spore masses form a very striking contrast. S. G.

DECIDUOUS FERNS.

AMONG the stove and greenhouse Ferns, few lose their fronds entirely at any period of the year, yet among those which do so there are some very desirable species. It not unfrequently happens that these get lost during the dormant period, sometimes through improper treatment, and I have known of several instances where they have been thrown away as dead by those not acquainted with their habits.

In the culture of all the deciduous Ferns, it is desirable to give them such treatment as will induce them to go to rest in the autumn; they will then have more strength to start early in the year. If grown under the ordinary treatment given to evergreen Ferns, they will struggle on nearly through the winter, but will only make weakly fronds; the rhizomes or crowns will be weak, and consequently very late in the spring before they make a start.

While it is desirable to gradually dry off the plants in the autumn, they should not be kept too dry after the fronds have dried off. The British Ferns ripen off their fronds in the early autumn when the ground is very dry, but later on, after they are quite dormant, they get an excess of moisture rather than otherwise. Such conditions no doubt apply more or less to deciduous exotic Ferns, though I should not recommend giving more moisture than would be sufficient to keep the roots from suffering, especially when grown in pots. When planted out they will generally derive sufficient moisture from the soil, but in elevated positions or where the soil does dry up, water should be given occasionally. I like, where possible, to leave the old fronds on after they have ripened off, as they help to protect the crowns of the plants, besides indicating what the plants are.

The Adiantums are among the most difficult to keep. A. lunulatum is a pretty plant for growing in baskets, and, except that it is deciduous, is a far more desirable Fern than A. dolabriforme. A. palmatum is another very elegant deciduous Fern. This is inclined to keep growing late on in the winter if not checked by being kept cool and dry for a time. A. speciosum, which under good treatment makes very large fronds, requires great care both in keeping the plants while dormant and in growing them. It is not often that good specimens are seen, though it is, when well grown, a most elegant Fern. The deciduous Davallias give less trouble. D. Mariesi, which is one of the best, loses all its fronds annually, but the new fronds start away almost before the old ones have ripened off. There is a very pretty crested form of this. D. bullata is another good species, the rhizomes of which are attractive when destitute of fronds. D. (Leucostegia) immersa makes a very fine basket Fern. D. (Acrophorus) pulchra is another deserving of notice. Of Nephrolepises there are two very desirable varieties which must be included in this list; they are N. pluma and N. Bausei, the latter, I believe, a variety of the former. Lygodium japonicum (usually known in gardens as L. scandens), though it may be kept green throughout the year, makes more satisfactory growth when treated as deciduous.

North American Varieties.

Among these there are some very beautiful deciduous Ferns. Adiantum pedatum, though hardy, is well worth a place in the intermediate house. Newly-imported plants will die off early in the autumn, and if started in warmth early in the year will soon make fine plants. I believe this fine Fern is grown much more extensively on the Continent than in this country. Onoclea sensibilis is another very desirable Fern. Of Osmundas, there are three which should be included in this list; they are O. cinnamomea, O. Claytoniana and O. gracilis. The last closely resembles O. palustris. Struthiopteris pennsylvanica may also be included. Although these North American Ferns are quite hardy, they succeed best when grown in a cool house, for when fully exposed they begin to grow early in the year and often get cut back by late frosts. Good loamy compost will suit all those referred to; started in a little warmth and given a little liquid manure, they make very fine fronds. The great beauty of all the deciduous Ferns is that they have such a fresh, green appearance, and make nice specimens with little trouble. A. Hemsley.

A GARDEN STREAMLET.

It is difficult to over-estimate the value of running water in the flower garden, however inconsiderable its volume. Effects are possible on the slope of even a tinkling rill that will vie in simple loveliness with any of the varied beauties of a wide pleasaunce. I know a garden in which naturally running water has been utilised with great success. Formerly the runnel, entering from under an ivied wall, crossed the garden by a subterranean channel, flowing unseen and unheard below the flowers, eventually passing out beneath the opposite wall and high road on its course to join a larger stream in the meadow beyond. There being a fair slope from side to side of the garden, it was decided to form a channel on the surface of the ground, and to endeavour to turn the streamlet into it. After some little trouble, the water being loth to leave its underground passage, this was accomplished, and the results have been all that could be wished. The little rivulet now gurgles into the garden through a hole in the Ivy-clad wall, turns with a swirl to the right, and, skirting a rockery at the wall's foot, in which Osmunda and Lady Fern, Hart's-tongue and Male Ferns, Asplenium and Ceterach flourish, interspersed with Myosotis and Primroses, Cyclamens and creeping Forget-me-not, Saxifrages, Sedums and white Pinks, flows for a few yards between it and a narrow path, the rough edging stones of which are fringed with a margin of Ferns and yellow Fumitory. Then, disappearing from view, it slants beneath the rough poles of a level bridge, coming to light again by a clump of Japanese Iris, and, curving away from the path beneath an overhanging lace-work of London Pride, passes pendulous turquoise heads of the Virginian Cowslip (Mertensia), patches of Dropwort (Spiræa filipendula) and the feathery inflorescence of Spiræa japonica, S. palmata and S. venusta, while in the background stands, on one side, a colony of the Golden-rayed Lily of Japan (L. auratum) overshadowed by the broad leaves of a lofty Palm-like Aralia spinosa, and rising from out a breadth of hybrid Aquilegias, their mingled blossoms a dream of harmonious colouring—reds and yellows, faint pearl-greys and sulphurs, dark purples and dead whites, to be succeeded later in the season by a backing of Starworts, perennial sunflowers and Cactus Dahlias. On the other side are clumps of Tradescantia virginica, Œnothera Youngi, and the tall scarlet Lychnis chalcedonica backed by a large plant of the Lyre Flower (Dicentra spectabilis), Hedychiums and brilliant-flowered Cannas, behind which a large bush of Spiræa Lindleyana spreads white panicles of bloom above its graceful leafage, and the partnership of the New Zealand Reed (Arundo conspicua) with Pampas Grass (Gynerium) extends the season of the downy feather plumes from July until late November. By a bushy shrub of variegated Box, through which twine the growths of Tropæolum speciosum, T. canariense and T. tuberosum that grow on an old tree-bole and drape the stiff Box sprays with vivid trails of scarlet, orange and yellow, the runnel suddenly swerves, and, hurrying past the white trumpets of the Bermuda Lilies, takes a 3-feet leap between overarching Lady Ferns and bounteous clusters of Poet's Narcissi into the Moss-grown and Ivy-wreathed semicircle of an old dipping well, falling with ceaseless song into the shallow pool beneath. In the spring the voice of the water is full and varied. It lilts the joy of the budding year, telling of the blue shimmer of wild Hyacinths about the grey Beech trunks on the hill that slopes above its source, of the scent of Primrose and white Violet, with which its eddies have tarried for a moment to whisper, of the unfolding of the curled Fern fronds, of the mantle of bright gold spread by the Marsh Marigolds in the water meadow and of the coming of the swallows; and, as it sings, ever and anon a scattering of pearl-bright drops falls upon hanging leaves and bending blossoms that nod their heads and bend yet lower to listen to the spring song of the stream. In the torrid summer heat the music of the fall is pitched in a minor key; its low refrain is unnoticed by the listless drooping leaves, unheard by the Lilies, that hold aloft their pure white chalices and await the hour when they shall be free to yield their fragrance to the dewy kisses of their lover—the evening breeze. The water dreams, and in its dreaming croons to itself of the luminous, jewelled eyes and iridescent gossamer pinions of the dragon-fly that flashed a momentary brilliance through the mazes of the tall Foxgloves; of the butterfly that with outspread, peacock-eyed wings, rested on the overhanging, shell-pink Dog Roses and of the water Reeds that retarded its languid flow. In the drenching, equinoctial days the voice of the cascade becomes a sonorous, hoarse monotone, its music fraught with memories of submerged, straining Flag leaves, of swaying tangles of scarlet-berried Bryony and of the drowned "gold of the ruined woodlands." Its turbid flood is encumbered with strange flotsam, hurrying ever on; the frail blue shallops of broken thrushes' eggs, black, sodden Chestnuts, lichened twigs, and fungus-covered bark—waifs and strays that have lingered long in sedgy nooks and quiet backwaters for the coming of the autumnal rains to bear them seaward. In the winter when the drifted snow lies deep above its upper course, the rill leaps out from its tunnelling into the light of a white world and falls amidst a setting of bright, keen icicle spears into the pool below, now black by the contrast of the glistening purity of its surroundings.

At the foot of the fall the path again approaches the streamlet, 2 feet of sloping bank intervening between it and the water. On the opposite side, just out of reach of the sprinkling of the cascade, stands a collection of tall Irises—ochroleuca, sometimes known as gigantea, aurea, and Monnieri, which bear 5-feet high scapes of showy blossoms, white, golden, and yellow. Further down are other Irises, great tufts of Iris Kæmpferi, both double and single, planted in specially prepared soil, light and rich; the great sweet-scented lavender Flag (I. pallida), I. sibirica, with its narrow grassy foliage and white and veined blue flowers.

Interspersed with the Irises are herbaceous Spiræas, Day Lilies, the fragrant yellow H. flava and the variegated H. Kwanso, brilliant scarlet Lobelia cardinalis with an undergrowth of white Violas, deep blue Salvia patens, early and late Gladioli, Doronicums, and masses of white and crimson Phloxes; whilst above the handsome foliage of Gunnera scabra and Acanthus lofty spires of the Cape Hyacinth (Galtonia candicans) droop white bells, tall Campanulas bloom, Delphiniums rear their azure heads, Flame Flowers' (Kniphofia) orange-scarlet spears glow, and the giant Himalayan Lily (L. giganteum) diffuses the vanilla-scented perfume of its pendent blooms. In the background every passing breeze stirs the pinnate leaves on the graceful arching shoots of the Bamboos (B. aurea and viridi-glaucescens), and the shining deeply-cut foliage of Aralia (Fatsia) japonica throws into relief its quaint inflorescence. On the narrow bank between path and stream are clumps of Narcissi, spring and summer Snowflakes, English and Spanish Irises, the winter-blooming Iris stylosa, Montbretia crocosmiæflora, and Schizostylis coccinea mingled with Forget-me-not, Woodruff, the Mexican Daisy (Erigeron mucronatus), and Omphalodes. Turning again sharply by a large plant of the blue African Lily (Agapanthus umbellatus), the rivulet skirts a 9-feet high clump of the Great Reed (Arundo donax) and takes a second plunge, this time between graceful trails of Muhlenbeckia complexa into a hollow of rockwork, the upper spaces of which are overgrown with Saxifrages and Sedums, Campanulas and Aubrietias, Gentianella, Plumbago Larpentæ, Yuccas, Linum flavum, the blue Apennine Windflower, Arabis and Alyssum, the lower level being the home of the variegated Water Flag, whose striped sword leaves rise from the gold and crimson of Mimulus blossoms and the pale blue of the Water Forget-me-not. In this hollow the streamlet, disappearing beneath a veil of Muhlenbeckia, leaves the gar-

den, having afforded during almost every season of the year, in its course of under 50 yards, evidence of the beautiful effects obtainable by the appreciative association of flowers and foliage with running water. S. W. F.

Kitchen Garden.

LETTUCES IN WINTER.

I should be glad if any of your numerous readers who have been successful with Lettuce during the winter months could advise me of any means whereby crisp, well-grown Cos Lettuce could be had during the month of February. My employer tells me he can get beautiful Lettuces at Covent Garden during that month.—Young Gardener.

*** Much, but not all of the excellent Lettuce that finds its way to Covent Garden Market and from thence to provincial towns during the winter is undoubtedly imported from France. Cloches, or large bell-glasses, are largely used by the French growers, and of late years these have also become part of the stock-in-trade of the more enterprising classes of market gardeners round London, Bristol, Bath, and elsewhere. Although "Young Gardener's" employer seems to prefer Cos Lettuces, we may reasonably presume he would not be averse to well-grown Cabbage Lettuce as well, and in order to have a good and continuous winter supply of both, several dozen of these cloches ought to be provided. Each of these is capable of holding one central plant of a Cos variety and five plants of a Cabbage Lettuce around it. It is not too late to commence the French method of culture now, always provided "Young Gardener" has a number of late-raised Hicks' Hardy White Cos or Black-seeded Brown Cos, and either All the Year Round or, better still, Commodore Nutt and Early Paris Market Cabbage Lettuces just large enough for transplanting. A sheltered border with a good slope to the south and the soil moderately light and rich is the best position to select for the cloches, and fill these in this way: Arrange a row of cloches closely together across one end of the border to be filled, press these into the soil and plant inside the rings so formed. If one plant of Cos variety is placed in the centre, ten plants of a Cabbage variety may be arranged around it 3 inches or so from the ring, one half of these being cut out for use before they have actually hearted in. In this way one or several lines of cloches can be filled, a good succession being afforded from sowings made at intervals of a fortnight, or rather more, during August and September, those raised in October not hearting till early in the spring. Much naturally depends upon the weather experienced and the locality itself, and that is why it is unwise to name any particular date for sowing. Once the cloches are placed over the plants they should be kept closed down, as it will be found that abundance of light will keep the plants sturdy enough, and they will continue to make good progress in all but very frosty weather. Cover with either strawy litter or double coverings of mats whenever severe frosts are imminent, but at all other times admit as much light and sunshine as possible. The Cabbage Lettuces will be the first fit for use, and the central plant will improve considerably after their removal, all being very crisp and tender and with a fair amount of blanched centre.

Good Lettuces could also be cut from pits and frames throughout the winter, but these should have a sharp slope to the south and not be too limited in extent. It is useless to try to keep nearly or quite fully grown plants after midwinter—at least, such is my experience, and if, therefore, good well-grown Lettuce is wanted in February the start should be made at once with strong plants prepared in the open ground. Form a hotbed of leaves and manure, trampling these together as firmly as possible with a view to having a gentle, lasting heat rather than a strong bottom-heat that will not last long. Cover with a thin layer of short manure, and on this place 6 inches of rich loamy soil. Too often Lettuce and late Endive are planted in poor soil and kept dry at the roots, whereas they should have moderately rich, though not very heavy soil and be kept constantly moist at the roots, these promoting a steady, yet strong growth. When planting Lettuces, let the earlier hearting Cabbage varieties alternate with Cos varieties, the latter having time to improve after the former are cut. Arrange the Cos varieties 8 inches apart in rows 12 inches asunder, the Cabbage varieties being planted rather more thickly in the alternating rows—that is to say, midway between the rows of Cos Lettuce. Keep the frames or pits close till the plants are well established, and give little or no air during the winter, unless it is found necessary to check a spindly growth consequent upon too little sunshine and light reaching them. If a "Young Gardener" has no plants suitable for starting into growth in frames, he cannot expect to have Cos Lettuce fit to cut in February next, but should the winter prove to be somewhat mild and open, it might be possible to have really good Cabbage Lettuce early in March, the plants for this crop being raised from seed sown now. Either Golden Queen or Early Paris Market are suitable for the purpose, both forcing admirably and by many would be preferred to Cos Lettuce. Sow the seed thinly in pans, place in heat to germinate, and before the plants become drawn, raise them well up to the glass in rather less heat than formerly. On no account raise two hundred plants when one hundred would be ample unless more than one pan or box is used, the thinly-raised plants not requiring to be pricked out before they are placed where they are to attain their full size. Prepare a gentle hotbed in a frame or pit much as already advised, and by the time the plants are large enough to move, allowing them to become drawn and weakly being a very bad start. Dibble out somewhat thickly, so as to be able to cut out every other one for use before they are large. When well looked after in the way of extra protection in cold weather and watering, growth is fairly rapid, and when fully grown these forced Cabbage Lettuces are so very tender as to require to be very carefully packed in boxes when sent to the town house. Those I have forced in frames have been considered superior to any Lettuces cut during the rest of the season, but I do not quite agree with such a statement, having a predilection for perfectly blanched hearts of the Brown Cos varieties.—W. Iggulden.

Large Beet.—The season has evidently been at fault as regards garden Beet, for coarse roots, as noted by "G. W. S.," seem pretty general this year, and I have noticed many plots containing very large roots. On one large plot in particular the roots have reached such a size as to be entirely useless for cooking, and they will be given to the cattle. The strain is not at fault, as the seed was carefully saved at home from selected roots of a variety which has been grown in the same garden for very many years, and which has never before been coarse. Seed is sown about the first week in May. My own roots of the same variety are but little bigger than usual, as the soil is neither so deep nor so rich. I grow besides this a good breadth of Dell's Crimson, which I sow in the kitchen garden, transplanting the thinnings from there to the flower garden, so that I always have a fair batch left behind. I find this a better plan than sowing where the decorative plants are to be grown, as birds are not so troublesome, and transplanting being all done about the same time, there is less chance of gaps, nothing transplanting so easily as Beet if caught at the right time.—J. C. Tallack.

Cauliflowers.—The sharp frosts of a few weeks since practically led to the disappearance of Autumn Giant Cauliflowers from the shops for a time, but a return to open, and for some time distinctly mild, weather enabled late plants to complete heading, so that just recently again Cauliflowers have been for the season fairly abundant. This fact shows how important it is not only to plant for autumn supplies abundantly, but also successionally. To be content with the products of one sowing for autumn use exhibits little desire to cater for a season's needs in the fullest way. Seed is cheap and the ground needed for a sowing very small; therefore to have enough in succession and to spare it is wise to sow in March, April and May, planting out as plants and circumstances will admit, but always making one late planting at least, so as to have some to head in during December, when it so frequently happens we have a mild time. What with Snowball, Early Mammoth, Magnum Bonum, King of the Cauliflowers and Autumn Giant, some not materially differing from others, we have the finest conceivable material for the keeping up of a supply over a long season. Snowball sown in January and pricked out into a frame, then transferred to an open, warm border under hand-lights, gives, if not large, at least perfect heads in May and June, whilst sowings in February and March of the larger-headed varieties carry on the succession till heads from plants raised outdoors are ready for cutting. Generally, we plant these large Cauliflowers in soil that is too rich, because for some purposes big heads are desired. Ordinarily, however, they are better in less rich and firmer soil, planted too more closely, getting up to Christmas more heads if they be of less dimensions. —A. D.

Garden Flora.

PLATE 1043.

CALOCHORTUS LUTEUS CONCOLOR.

(WITH A COLOURED PLATE.*)

The Calochorti have been brought into prominent notice of late, and are likely to receive more attention in gardens, since it has been proved that they can be successfully grown in the open ground, and, given the right conditions, with much more success than when they are coddled up in pots and frames. There is no need, however, now to refer to the family extensively or to give details of culture, several articles having been devoted to these flowers and their requirements both in the current and two previous volumes of The Garden.

The variety here figured is another most noteworthy addition to the family, and for its introduction we are indebted to Messrs. R. Wallace and Co., of Colchester, who have made a speciality of these fascinating flowers. C. luteus is a pretty species that gives a welcome change of colour in comparison with the many forms of C. venustus, its flowers being of a clear lemon-yellow, spotted with brownish red at the base. The variety here figured has been placed by Mr. Baker under C. luteus, with the distinguishing

* Drawn for The Garden by H. G. Moon in Messrs. Wallace's nursery at Colchester. Lithographed and printed by Guillaume Severeyns.



name of concolor. It obtained an award of merit at the Drill Hall on July 13 of this year, and we saw it flowering in the nursery at Colchester, where it was very conspicuous previous to the above-mentioned date. In growth it is very sturdy, its shoots standing up boldly erect, and although little more than 1 foot in height, they are freely branched and bear great numbers of flowers. Those shown in the accompanying plate are secondary flowers and not so large as the earlier blooms we saw. The colour is a rich buttercup-yellow, the petals glistening in the sun as if polished, and slightly marked with chestnut-red at the base. Those who want to confine their collection to a select few must include this kind, as none is more robust in growth, and in colour it at present has no counterpart.

The Week's Work.

KITCHEN GARDEN.

Forcing Rhubarb.—The earliest stools of Prince Albert introduced into the warm end of the Mushroom house the third week in November are now starting into growth freely, and will be ready for pulling shortly before Christmas. About December 15 a second batch of stools must be put into a similar position. A portion of the permanent bed in the open ground should now be covered either with pots made specially for the purpose, or tubs with the bottoms knocked out. These should then be built round with a sufficient thickness of fermenting material previously prepared by turning, so that the rank steam has escaped. Leaves and stable litter may be used in about equal proportions if there exists any fear that the indoor supply will be exhausted before that covered by leaves alone will be fit for use. Where, however, time is not a desideratum nothing surpasses a bed composed of leaves only, as these retain the heat to the very last, the ammonia arising therefrom imparting flavour to the Rhubarb. The best example of forced Rhubarb I have ever seen consisted of a good-sized bed of the true Prince Albert. Stout stakes were driven in round each stool, so as to form a square; round these hay bands were closely wound, small lights being laid over each, and Oak and Beech leaves well trodden into the intervening spaces. A little straw was then spread over the whole surface, a few extra forkfuls being put on to each light. This plan allowed of the stools being examined from time to time, and when growth was advancing if the weather was mild a little air was admitted by moving the lights on one side. A second bed grew by the side, so that they could be forced and rested alternately. A good deal of harm is annually done to Rhubarb by piling up huge mounds of hot stable manure, which literally stew the crowns before the evil of overheating is discovered. Where it is intended to make a new bed in spring, good-sized healthy pieces with a couple of crowns or leads may be broken off the stools as lifted and laid in in some sheltered convenient corner ready for planting in February or March. The sooner the ground is prepared for the roots the better, as such a rich larder is needed, that time is required to allow the manure mixed in trenching to decompose and the ground to settle. When the plants are put into newly-dug ground in spring it often happens that the roots get an insufficiency of moisture, particularly should the rainfall be under the average; consequently an indifferent growth follows. For the sake of quality as well as quantity, a change of ground is needed every half dozen years. If sensational sticks are required for exhibition, a good thick layer of rich manure may be placed under the stools and the good soil used for filling in. Liquid manure also soon increases the thickness of the sticks.

Potting Cauliflower plants.—This ought really to have been done in October, but the plants from late sowings—and which are still small—may yet be potted. Some gardeners imagine there is a deal of trouble connected with this process, but this is more imaginary than real, as if much wet and severe frost are kept from them they do not require coddling; in fact, nothing resents it sooner than Cauliflowers. For potting, use a good holding loam and a sixth part well rotted manure, using pots 2½ inches or 3 inches in diameter, and plunging in a bed of ashes in a well-glazed frame. Plunging I consider very necessary, as when the pots are left above ground the balls are frozen as hard as stones and the roots suffer, causing wholesale bolting as soon as growth commences in spring, or even before. Expose the plants fully on all fine days, and when mild let abundance of air be admitted by tilting the lights well up at the back.

Mushrooms.—Some beds made up at the beginning of October will now be in bearing, and must be treated to an even temperature, not exceeding 50°. Fire-heat may be employed so as to maintain a heat of 55° if the first beds are later than usual, but as soon as the young white Mushrooms are seen peeping through the surface the first figures must be aimed at. High temperatures—especially where kept up by pipe-heat alone—have a tendency to unduly dry the atmosphere, necessitating surface moistening and frequent floor-sprinkling, which cause the disorder known as blackheads, the crop shrivelling up instead of swelling off. The old plan of covering beds is a good one, saving labour in the end and keeping the surface in a moist state without sprinklings.

Cleaning seeds.—In some large gardens seed of certain choice strains of vegetables is annually saved, advantage being taken of wet days to dress and clean the same. After cleaning, store in muslin bags and hang them in a perfectly dry, cool place. A cupboard backing up to a wall, the opposite side of which is a fireplace, is about the best place for storing seed. Pea and Broad Bean seed should likewise be looked over in bad weather, and all grub-eaten and faulty seeds removed.

Cardoons.—Where the latest lots of Cardoons are still in the ground, they should now be lifted and placed in a cool dry shed or root store. Get as much soil as possible to the ball when digging them up. Where room is scarce I have known gardeners keep them for a considerable time by suspending them from the roof. If the winter is mild they may, provided they are well covered with Bracken, be left in the ground in warm soils, but in damp, low-lying situations they will not stand it, and at any time much wet is liable to ruin the centres. Those already in store must be looked over occasionally, and any that show signs of decay used at once. The root-room generally must likewise be attended to at regular intervals for the same purpose.

Swede Turnips.—Many do not seem to know the value of these roots for a change in the dining room. Here they are sent in twice weekly; indeed some prefer them to the white ones. It must be remembered, however, that roots only from a good rich soil must be selected, and those not too large, or the flavour will be hot and strong. It is fortunate where Swedes are liked, as their use prolongs the supply of other vegetables. Early lots of Coleworts in southern counties which are commencing to split may be kept for some time by lifting with a little soil attached and laying them in a cool, open shed in semi dry-soil. When rain gets into the split heads, decay soon follows.

Routine work.—In fine dry weather, opportunity should be taken to clear off any exhausted crops and to get manure wheeled on to all vacant plots at the first approach of frost. In cases where the ground will not be dug or trenched for the present, it is a good plan to tip the manure in one or two large heaps and to throw a little soil over it. This prevents its properties from escaping, and where near the mansion is not so unsightly. Gas-lime may now be safely dug in, not only into plots which are to be sown with Spinach, but also into those to be planted with Cauliflowers, Cabbage, Beans; indeed the whole garden is benefited by an occasional dose to rid it of all kinds of grubs and purify it generally. On all plots where sowing or planting will not take place until April or May, the best way is to fork it up roughly and then to sprinkle the gas-lime somewhat thickly over the surface. In this way the rain gradually washes it down, and the upper portion gets a larger share of it than when it is dug in at once. After a few dry windy days, get the walks of the kitchen garden swept and rolled again. This will solidify them for the winter, and no more rolling will be needed till spring. In unfavourable weather also shorten stakes which have decayed at the bottom, these being just what one wants for the dwarf Peas on early and second early borders. Pegs and labels either for numbering or writing upon may also be made.

J. Crawford.

FRUIT HOUSES.

Forcing Strawberries.—The season is now at hand when pot Strawberries are forced for very early supplies. To get good fruit at the end of February or early in March, more than ordinary care is required. In no case do I advocate very early forcing for the mere sake of having fruit at the time named unless there is a special demand for it. Some new varieties are said to force freely at this season, and doubtless many will be started at this date, but as far as my experience goes, no variety can be relied upon unless specially grown, well ripened and given a certain amount of rest previous to forcing. Unless these conditions are fulfilled it would be well to defer forcing for at least a month and give the plants a longer rest. I think much also depends upon the way the plants are rested. I still rely upon the well-known Vicomtesse Héricart de Thury for what may be termed first crop. I am aware all will not agree with my selection, but to a certain extent I am handicapped, and the variety named is of sturdy constitution and forces freely under adverse circumstances. It is of such good quality, too, when grown in strong heat that I advise it for extra early supplies. I admit its size is a drawback and overcropping must be avoided. No other variety can be given so much warmth as this, an important point, as many shifts have to be made in early forcing, few being able to devote special houses to these fruits. I have grown this variety in Cucumber and Pine houses and never had a failure. For succession, Royal Sovereign promises well; it was very good last year. We are not short of really first-class forcing kinds for April supplies, as La Grosse Sucrée is a splendid forcer, having very few small fruits, and if a quantity is desired for a certain date it may always be relied on. I grow this with the newer Royal Sovereign for April supplies.

Temperature and moisture.—The first is important, as excess at the start ends in failure. To get a free growth at this season a little bottom-heat is of great assistance. This may be given by preparing a good bed of fresh leaves for the plants. The heat must not be above 75° or 80° at most, with 20° lower for top heat. If these conditions are reversed the top growth will start in advance of the roots, and the result will be plenty of leaf growth and few flowers. It may be thought the temperatures advised are fully high, but more warmth is necessary to start the plants now than a month later with a longer rest. In no case do I advise exceeding 55° at night; 5° lower would be better with a free rise by sun-heat during the day. All cannot give bottom-heat as advised, having to force on shelves, where more moisture is required at the roots, also overhead, as the plants dry much sooner. The moisture from the warm bed keeps the plunged plants moister. In fine weather damping overhead will be beneficial and keep the plants free of green-fly. Should this pest attack the plants, fumigate at once and syringe afterwards. Many fail to get very early plants to throw the flower-spikes well out of the leaves. This is owing to want of light or too little moisture. The glass should be kept clean

and the plants as near to it as possible. I do not advise much manure till the flower-spikes are showing, when the plants may be assisted with clear soot water, and when the fruit has set with stronger liquid food. Now is an excellent time to place second batches in Peach houses or vineries just started. The plants move along slowly and make a strong growth, given cool treatment. Many growers top-dress at this season when starting. I do not advise it with plants in good condition. I prefer to rely upon liquid food later on, and a little bone-meal spread on the surface is soon absorbed by the surface roots. The soil if at all loose in the pots should be well rammed, the pots washed, old leaves that have lost colour removed, and the drainage examined before placing indoors. In the case of any varieties which mildew badly, it is well to give a dressing of sulphur, well covering the under sides of the leaves.

Strawberries at rest.—In a former note I referred to the importance of resting, at the same time pointing out that plants in pots suffer much sooner than those in the open ground. The season has now arrived for all pot plants to receive protection. The best protection is probably cold frames, plunging the pots in ashes or fibre, and removing the sashes in mild weather. If put into fruit houses, care must be taken not to excite the plants. They should be kept cool. I would rather plunge in beds on a well-drained quarter in ashes. Many growers can place on floors of fruit houses that are at rest if due attention is paid to moisture. Many plants have been lost by being severely frozen, losing all the best roots round the sides of the pots when placed in heat.

Figs in pots.—Now is a good time to start pot trees to obtain fruit in April. The grower of early Figs will have given the plants special culture with a view to early fruiting. Such plants will now be showing the small embryo fruits on the points of the shoots. Much better results are secured when bottom heat can be given, but it must not exceed 80° at the start. I prefer fresh leaves, or leaves and litter prepared by frequent turning over if the roots are not assisted by hot-water pipes. With healthy plants, the roots when plunged in warm leaves soon push out and lay hold of the plunging material. This saves much watering. Large trees in pits or pots that have been forced yearly soon start if they have been given a good rest, and little heat will be required. A low night temperature is advisable at the start—50° to 55°, according to the weather, with a rise of 10° by day—frequently syringing the trees overhead on fine days and damping all parts of the house several times daily. As the leaves develop the heat may be increased, but only slightly, as if the fruit is too far ahead of root growth it turns yellow and drops. Less syringing will be required as the trees get more leaves, and the roots may then be assisted with liquid manure. In dull, sunless weather it is better to rely upon moisture from the house than overhead syringing, which causes rust on the leaves and fruit. Dryness at the roots must be guarded against; on the other hand, stagnant moisture is equally injurious, so that perfect drainage is important. As soon as it can be seen which fruit takes the lead it is well to thin. The shoots should be pinched at the fifth or sixth joint or leaf from the fruit, and any fine spray or sucker growth cut away. By building up well-balanced trees a second crop is assured and good wood for next season's forcing.

Melons.—The season for ripe fruit is now nearly over and a few words will suffice as to bearing plants. The early part of the autumn was more favourable for late plants than is often known, so that fruits have been more plentiful and of better quality. Those who have late fruit just pushing will need to give a night temperature of 65° to 70°, with 10° higher by day, with as much warmth as possible by sun heat. Very little moisture at the roots is necessary unless the plants are in shallow beds heated by hot water. The foliage must be kept healthy to the last, and as the fruits colour, flavour may be assisted by cutting and placing on a warm, dry shelf. Those who value early fruit would do well to prepare plants for the first crop. By sowing now good plants may be had to plant early in February. A warm bed near the glass is necessary, sowing the seed in 3-inch pots in good compost made firm. For very early supplies I prefer a small or medium-sized kind with a thin skin. Such kinds do well in large pots if a Melon house is not available.

G. Wythes.

Chrysanthemums.

NEW AMERICAN CHRYSANTHEMUMS FOR 1895.

Those who are at all familiar with the position of horticulture in the United States of America need no reminding of the continued popularity of the Chrysanthemum in that country. Last season, besides the private displays and trade exhibits, there were Chrysanthemum shows held from one end of the Union to the other by the florists' clubs and horticultural societies to an extent which, if equalled, has probably never been surpassed. Places so far apart as Boston and San Francisco, Chicago and Baltimore, have now commenced a regular series of annual exhibitions of the Chrysanthemum, with the result that many intermediate cities are following their example, and consequently spreading a love for the popular favourite in quarters where it was only imperfectly known before.

The vast area over which the Chrysanthemum now reigns in the States is one of the chief difficulties with which the American Chrysanthemum Society has to contend, and one which most of us in England are not likely to appreciate to the full. As at present constituted, that society does not undertake the organisation of shows on its own account, but deals with other matters pertaining to the flower, such as the registration of new seedlings, a work that might usefully be imitated here in Europe, the determination of synonyms, and more recently the appointment of local committees to examine, in much the same way as our floral committees do, new varieties that appear during the season. It may perhaps be patriotic, but it is scarcely impartial that a rule appears to exist that no foreign seedlings can be the subject of any award by the American society. From the proceedings of the tenth annual convention of the Society of American Florists held at Atlantic City, N.J., in August, 1894, of which the American Chrysanthemum Society is a branch, it seems that these local committees consist of three members each, and that they were appointed to examine new Chrysanthemums in the following cities: Boston, New York, Philadelphia, Cincinnati, and Chicago. It is interesting to quote the conditions upon which the novelties were shown, inasmuch as they differ in some respects from our floral committee regulations. Meetings were appointed for October 20 and November 10, but in the published reports which appeared in the *Florists' Exchange* they appear to have been held on November 10, 17, and 24 :—

Not less than six blooms of each variety to be shown, and these to be only such varieties as have been given at least the second year's trial.

No member of a committee shall exhibit his own blooms before a committee of which he is a member.

It will be well for those who exhibit seedlings under number to also provide the committee with a name to be used in case the variety is commended, so that they may be reported upon by name rather than number.

At the same meeting it was resolved, as some doubt appeared to exist as to the proper name, that the society should be known as the Chrysanthemum Society of America. During 1894 new Chrysanthemums were registered from sixteen different raisers, and a further list is given of names registered, but the varieties had not then been distributed.

The proceedings of the local committees having been forwarded to the secretary of the society, the results are tabulated and summarised, in which form they appear in the *Florists' Exchange*. To anyone interested in the importation of new American varieties the report given by the secretary will be useful, for it states the name of the flower, date when shown, where shown, the exhibitor's name, type and colour, whether worthy of the society's certificate or not, and the remarks concerning it. The principal exhibitors at these meetings appear from the report to have been Mr. T. H. Spaulding, Messrs. Nathan Smith and Son, Messrs. E. G. Hill and Son, and several others, but those named are specially known in this country as having contributed to enlarge our lists by obtaining some very meritorious novelties. There will be no need to refer to them in this article, as a perusal of former contributions on the subject will supply any details that may be necessary.

In the list appended to this paper will be found some names to which no raiser is appended. These, it should be mentioned, are varieties of Japanese or Californian origin gathered from sources where such material is not supplied. One grower whose name is well known has this year for the first time dropped the practice of giving raisers' names in his list, which it is to be hoped he will resume again next year, because there is often great difficulty in tracing the origin of some of our best American Chrysanthemums.

The incurved Japanese section seems likely to receive large additions from the American novelties of 1895. This is a class that some eminent specialists seem to have no great liking for, but it has been a steadily increasing one, and the majority of the varieties, if we except those of M. Ernest Calvat, have been received from America or from Japan *via* America. The term "early" which will be found in some of the descriptions means that the flowers are October blooming kinds in the States. Here in England, however, our method of cultivation may cause some variation in the season of their flowering. As regards habit, it is some satisfaction to find that many of these new-comers are dwarf, and indeed it would appear that the era of the 9-feet and 10-feet varieties like Mme. Audiguier and Mme. Bertier Rendatler has been brought to a close. Three feet and 4 feet in height is what is claimed to be the limit in many of the undermentioned sorts.

Amber Ada Spaulding.—An amber sport from Ada Spaulding, similar in all respects save colour.

Amoor.—Very broad petals, colour rich reddish brown, reverse silver-bronze.

Arctic.—Colour pure glistening white, faintly shaded salmon.

Autumn Leaves (Spaulding).—Japanese; flat petals, colour creamy white, mottled and striped red, tipped cream or light yellow.

Bankok. Incurved; colour bright yellow.

Brigand (Spaulding).—Japanese; slightly reflexed, deep crimson, very dwarf.

Bronze Giant (Spaulding).—Japanese incurved; colour golden yellow, heavily shaded deep crimson.

Burt Eddy (Vaughan).—Colour silvery rose and purple.

Camille d'Arville (Spaulding).—Japanese; white, tinted salmon when opening.

Capt. J. C. Ainsworth.—Colour pure glistening white, large blooms.

Castle Peak.—Spherical bloom, fine straight petals, colour white, suffused pink.

Chipeta (Smith and Son).—Incurved Japanese; colour quite similar to ripened Oak leaves, strong grower.

Crystalina (Vaughan).—Colour snow-white, early.

Dean Hole (May).—Incurved; broad petals, white, shaded pink, changing to pearly white.

Diavola (Spaulding).—Japanese; colour a mixture of lemon, white, and red, under petals white, shaded pale lemon, centre ones striped red.

Dr. W. A. Wakeley (Spaulding).—Japanese incurved; colour chrome-bronze, under surface of petals shaded red.

Edith Smith (Spaulding).—Japanese; flat broad petals, ivory white, globular flower, early.

E. M. Bigelow (Dorner).—Incurved; colour deep reddish orange, dwarf.

Esther Heacock (Spaulding).—A sport from Ada Spaulding; colour yellow, rather dwarf.

Emma N. Crosby (Spaulding).—Bright golden yellow, lower petals reflexing, forming a globular flower, dwarf.

Experiment (Spaulding).—Japanese; broad spreading bloom with narrow petals, colour shrimp pink.

Ezeta (Smith).—Japanese; an improved Rohallion; colour pure bright yellow, early, dwarf.

Fisher's Torch.—Large blooms, colour fiery red.

F. L. Atkins (Pitcher and Manda).—Japanese reflexed; colour pearly white, long broad petals, globular flower.

Formosa.—Bright purple.

Fred. Walz (Bock).—Florets partly incurved, colour pale pink, dwarf.

G. E. Goodman.—Globular blooms, colour light lemon-yellow.

Gold Dust (E. G. Hill).—Incurved; colour golden yellow.

Golden Castle.—Colour deep golden yellow.

Hallowe'en (E. G Hill).—Incurved; reverse pinkish grey, inside rose-violet.

Helen Bloodgood (Spaulding).—Japanese incurved; clear pink without any shading, a large, globular flower.

H. W. Rieman (E. G. Hill).—Japanese; deep golden yellow.

James Weir, Jr.—Anemone; broad ray florets, colour dark velvety crimson, centre tipped golden yellow.

Jayne (Vaughan).—Incurved blooms; colour dark, shaded rose.

J. E. Lager (Pitcher and Manda).—Japanese; colour yellow.

Jennie Falconer (Spaulding).—Japanese incurved; self coloured, lemon-yellow, dwarf.

J. H. Troy (Pitcher and Manda).—Japanese; colour white, broad petals, globular blooms, early.

Katherine Leech (Graham).—Reflexed bloom, colour pure self pink, early.

Latest Fad (Spaulding).—Japanese; ribbon petals of great length, colour yellow, mottled and striped with crimson and bronze.

Lottie Alter (Spaulding).—Japanese incurved; broad petals, colour ox-blood-bed, reverse lighter, dwarf.

Lurline.—Japanese; similar to Good Gracious, colour deep silvery pink.

Marie Valleau (Spaulding).—Japanese incurved broad petals, colour soft cameo-pink, deeper towards the centre.

Marion Abbott (Spaulding).—Japanese incurved; broad petals, forming a deeper flower, pink, the colour of Rose La France.

Maud D. Reynolds (Spaulding).—Incurved flower, lower petals reflexing; colour deep canary-yellow.

Millbrook (Dorner).—Of the Viviand Morel type; colour bronzy salmon-red, dwarf.

Miss Elma O'Farrell (Dorner).—Reflexed blooms; colour salmon-rose, dwarf and late.

Miss Georgiana Pitcher (Pitcher and Manda).—Incurved blooms; colour yellow, dwarf.

Miss Georgie Crompton (Spaulding).—Broad flat petals, globular blooms, self-coloured golden yellow.

Miss Gladys Spaulding (Spaulding).—Incurved; globular bloom, colour white.

Miss Louise D. Black (E. G. Hill).—Japanese; colour reddish orange.

Miss M. M. Johnson (E. G. Hill).—Japanese incurved; colour deep golden yellow, early.

Mrs. Chas. Woolsey (Henderson).—Colour pure white, early.

Mrs. H. Robinson (Pitcher and Manda).—Incurved; said to be of the Queen of England type; colour white, early.

Mrs. H. L. Romig (Graham).—Incurved; colour creamy white, dwarf.

Mrs. H. W. Emerson (Dorner).—Colour yellow; considered better than H. L. Sunderbruch or Eugène Dailledouze.

Mrs. J. H. White (Spaulding).—Japanese; crimson, resembling Cullingfordi, reverse gold, dwarf.

Mrs. Moses J. Wentworth (Vaughan).—Chinese; full and deep, colour rich yellow.

Mrs. M. R. Parker, Jr. (Spaulding).—Broad, incurving petals, inside deep pink, reverse light silvery shade, dwarf and robust, early.

Mrs. S. T. Murdock (Dorner).—Colour light rose or pink, dwarf.

Mrs. Thos. G. Weidersheim (Graham).—Light pink, dwarf and early.

Mrs. W. A. Bryant (Pitcher and Manda).—Broad petals, colour chrome-yellow.

Mrs. W. H. Hurley (Graham).—Japanese; deep orange-yellow, dwarf and early.

Mrs. Wm. H. Rand (Vaughan).—Japanese; fine long, twisted petals, golden yellow.

Morocco.—Dark velvety maroon, reverse orange, large blooms.

Mount Everest.—Curious twisted petals, pure snow-white.

Mount Hamilton.—Reflexed bloom, bright red, shaded crimson.

Nellie Elverson (E. G. Hill).—Incurving blooms, petals deep Indian-red, faced with bronze.

Nellie P. Moulton.—Japanese incurved; colour bright yellow, without shading.

Nemesis (May).—Straight, broad petals, colour similar to Carnation Daybreak, dwarf and early.

Nyanza (Smith and Son).—A seedling from G. W. Childs, possessing the same brilliancy of colour, golden reverse, dwarf.

Oakland (Dorner).—Full deep blooms, clear shade of terra-cotta, rather dwarf.

Octoroon (Spaulding).—Japanese incurved; broad petals, colour ox blood-red, reverse lighter, dwarf.

Olympus (May).—Round flower; base of petals white, with delicate shade of pink outside.

Paridis.—Anemone; colour lemon-yellow.

Parting Guest (Spaulding).—Japanese; globular blooms, colour white, lower petals tinted rose-lilac like Puritan, dwarf and late.

Perfectio.—Foliage variegated and mottled with pale pea-green and white, blooms pencilled light pink.

Philadelphia (Graham).—Japanese incurved; very globular bloom, grooved pointed petals, colour white, tinted primrose at tips. Awarded silver-gilt medal, N.C.S.

Pride of California.—Colour rich chrome, shading to bright golden centre.

Princess Bonnie.—Anemone; clear golden yellow, full centre.

Port Imperial.—Deep lavender-pink, reverse silvery.

Quito.—Japanese; colour rich red and terra-cotta.

Radiance (E. G. Hill).—Incurving blooms, colour similar to Golden Wedding, early.

Satisfactio.—Anemone; ray florets chrome, centre deep yellow, intermingled with crimson.

Sophia Sievers.—Long broad-pointed petals, colour white.

Sunrise (May).—Very broad petals, inside bright terra-cotta, reverse old gold, blooms semi-incurved, dwarf and early.

Tasmania.—Dark crimson intermingled with white, and parti-coloured petals.

Thalia (Smith and Son).—Similar in form and size to Niveum; colour light lavender-pink, passing to rose, late, dwarf to medium.

The Egyptian (E. G. Hill).—Japanese incurved; similar in form to C. B. Whitnall, dark velvety red.

Trilby (May).—Petals slightly twisted, colour clear white, a bold round flower.

W. B. Dinsmore (Pitcher and Manda).—Japanese incurved; golden yellow, petals of great substance.

White Lotus.—Incurved; colour cream-white.

Yukon.—Incurved; colour pure white.

Zipangi (Smith and Son).—Outer petals reflexed, centre ones incurving, colour crimson-lake inside, reverse buff.

Zulinda (May).—Incurved; inside of petals clear rose pink, reverse silvery pink.

C. Harman-Payne.

P.S.—During the time the above article has been in the printer's hands I have learned that the American Chrysanthemum Society has resolved to allow foreign seedlings to be shown on similar terms to native productions, excepting the rule as to a second year's trial. This appears to be an act of fair-mindedness which European raisers will not fail to appreciate.

COARSE CHRYSANTHEMUM BLOOMS.

It is somewhat strange that the taste for huge, coarse-looking Chrysanthemums is so long-lived, and that scarcely a stand of blooms is exhibited that does not contain one or two of these gigantic specimens, that more often than not mar the whole. I was pleased, however, to note that the variety Etoile de Lyon was less numerous than usual throughout the late shows, and it would be no great loss were that ugly flower entirely discarded from exhibition stands. As a very late sort it has its uses and is occasionally presented in fair form, but not often enough to redeem its character. It is, to my thinking, one of the least beautiful of all Chrysanthemums. International was frequently met with. Now this sort has but one recommendation, and that is, it covers a very large space on the show stand. There is in it a notable absence of anything striking either in colour or form. Mrs. C. Harman-Payne was much in evidence everywhere, and was huge in size, but bore a faded look. One magnificent bloom was seen at the Aquarium show in November, quite exceptional in form and colour. A single specimen of presentable aspect, however, in an exhibition so extensive as the above-named is scarcely enough to commend it. But of coarse flowers, I think Van den Heede the ugliest. Half a dozen blooms of this variety were noted in a class for six of any kind, and the judges rightly passed them in favour of smaller, but more beautiful sorts. It is a huge flower, the petals stiff and ungraceful, and the colour a dull buff shade. Probably late buds might aid the growth of better flowers in the case of this sort. Still it is one, were it not for its size, which would soon be discarded. Duke of York is another giant only on very few occasions seen in a taking form. The general character shows the dull lilac tint of the outside of its florets. It is exceptionally large, and this seems to be the only cause for its popularity. Mrs. E. W. Clarke has not been seen often this autumn, nor is the loss great, for as a coarse, colourless bloom it has few equals. Condor was noted in a few stands, especially at country shows. This is a huge flower, quite outclassed now-a-days. I cannot remember having seen a single bloom of a rather popular kind of a year or two back, namely, Mrs. T. Denne. This dull rose-coloured Chrysanthemum will not be missed. It does not add to the beauty of a stand of flowers at a show, nor to a home display. Miss Ethel Addison, to my taste, belongs to the coarse, ungainly section, a remark that applies also to the newer sort from Australia, Pride of Madford, and Vice-President Calvat.

H. S.

COLOUR IN CHRYSANTHEMUM BLOOMS.

Different localities have undoubtedly a great effect upon the colours of these flowers, as have also manures. I noticed that the blooms exhibited at the Aquarium by a cultivator from a southern seaside town were exceptionally bright. I am inclined to think, indeed, that the flowers of Viviand Morel, Charles Davis, and Miss Dorothea Shea put up by Mr. Streadwick, an amateur from St. Leonards-on-Sea, were never matched for depth and richness of colouring. But the greatest differences are caused by the time (whether early or late) we select the flower buds. It is no uncommon thing for persons to send me blooms of varying shades of colour from well-known sorts, fancying they have obtained valuable sports. A few years back the white Etoile de Lyon was in demand, and many a specimen was seen almost white in colour, this variation being due entirely to the taking of early flower buds. The most common occurrences, however, are connected with the variety Viviand Morel and its sport, Charles Davis. The latter from early buds will come quite yellow, and in slightly darker shades reach the most esteemed shade—a bronzy-rose, according to the time the buds are secured, the terminal or last buds, when the plant is naturally grown, being those that produce this taking shade. In the same way the type is quite white when early flowers are grown. These vary to a lovely mauve-pink from late buds. The florets, again, are of better substance from late buds in both cases. Graphic, a new variety, is very changeable in colouring. Very fine deep flowers of it were exhibited the other week quite white, and a fortnight later I saw the same kind of a lively pink colour, the form of the blossoms differing too in a remarkable manner. Mrs. W. H. Lees is another sort of variable form. Early in the season its florets are of extra length. These droop and hang loosely, with just a curl at the tips. On buds obtained at a medium period the florets, instead of drooping, curl upwards and build up a bloom quite pyramidal in formation. A flower of this shape was seen at the last floral committee meeting of the National Chrysanthemum Society, and, like those blooms from early buds, was almost white in colour. Now from terminal buds I have the sort pink with shades of white, but the form drooping. We have thus three distinct forms in one variety;

The terra-cotta-coloured Miss Dorothea Shea is hardly recognised when early buds are taken. It then assumes a dull colour, whilst the shape of bloom is anything but striking. Another instance is the sort Wm. Seward. From early-formed buds the florets are short, stiff and dull-coloured, but when late buds are depended on the blossoms are vivid crimson, the florets long and hanging down in a graceful manner. President Borel is an uninteresting variety when early buds are selected, the late blooms being especially rich in rose-crimson colouring. In fact, all highly-coloured sorts are best obtained from late buds. E. Molyneux is seldom seen in good form because of early blooms being grown. These, almost before they are open, fade off to a dingy brown colour. At its best there is no Chrysanthemum more striking for its colour. Col. W. B. Smith is sometimes seen reflexing its florets. In this state the colour is certainly rich, but not nearly so taking either in colour or form as when it is selected from late buds. One might go on with names. My idea in this note, however, is to point out the fact that in selecting early buds with the desire to obtain gigantic flowers, we often so alter the character of varieties as to quite lose their beauty, and excellent sorts may be condemned before they have been properly grown.

H. S.

American show Chrysanthemums.—There is always a keen interest on both sides of the Atlantic to know the relative positions of the popular varieties. Many of the finest English kinds do not seem to do well in America, and some of the American seedlings when imported here do not maintain their reputation on our show boards. Philadelphia, to wit, has not been shown in a single winning stand in the leading classes at our shows this year. The varieties of American origin that have done best with us up to the time of writing this note are the following: International, H. L. Sunderbruch, Hairy Wonder, Col. W. B. Smith, W. H. Lincoln, Eda Prass, Lord Brooke, W. W. Coles, Niveum, Mrs. Dr. Ward, W. Tricker, Puritan, G. W. Childs, W. G. Newitt, Primrose League, Good Gracious, Violet Rose, Lilian B. Bird, The Queen, Golden Gate, Waban, Mrs. W. H. Lees, Mutual Friend, Beauty of Castlewood, Mrs. E. W. Clark, Miss Ethel Addison, Mrs. E. G. Hill, Miss Anna Hartshorn, Duchess of Wellington, Mrs. C. W. Wheeler, and A. H. Fewkes. Of these, International is coarse and inconstant in colour; Col. W. B. Smith has been exceptionally fine and deep in colour; W. H. Lincoln, deep and pure in colour; G. W. Childs, very rich and probably finer in its intensity of crimson than ever; Golden Gate, large, and of a beautiful rich shade of yellow.—Chrysanth.

SHORT NOTES.—CHRYSANTHEMUMS.

Chrysanthemum Golden Gate.—This rather late-flowering sort is notable for a striking shade of colour, a tawny yellow, quite distinct from any other. It belongs to the Japanese class, the petals being reflexed. The growth is excellent. The variety was introduced a few years back from Japan.—H.

Chrysanthemum M. Chenon de Leche.—This variety is among the best of E. Calvat's seedlings, being so distinct in shade of colour. The combination is yellow and rose, which is generally described as crushed strawberry. Its flowers are full and deep and the growth all that one can desire.—H.

Chrysanthemum Reine d'Angleterre.—When first seen last year I thought this too coarse, but this season the fault is not noticeable. I think it will replace Etoile de Lyon, so popular with exhibitors. It is a very large flower, with long, flat, slightly drooping petals. The colour is a pleasing shade of rosy white, the growth remarkably dwarf and sturdy. The variety will be much esteemed for exhibition.—H.

Chrysanthemum Edith Tabor.—One of the best of this year's novelties is the above. It would seem difficult to improve in yellow Japanese Chrysanthemums, yet this stands out as a decided gain. The colour is rich; the florets, extra long and fairly wide, hang down gracefully, and have just a slight curl at the tips. It was raised from seed in this country, and will be sought after on account of its charming character.—H.

Chrysanthemum Australian Gold.—This is one of M. E. Calvat's latest novelties; in fact, the only one he has presented in good form so far this year. We must not talk yet of this raiser's strain being run out. It is only that he has failed to grow the blooms as well as usual. The above-named is a massive and beautiful bright yellow Japanese flower of a drooping character, and the reverse of the florets shows a lemon tint, a pleasing combination.—H.

—— M. Ernest Calvat desires us to state that his new seedling, certificated by the N.C.S. on October 30 under the name of Australian Gold, should properly have borne the name "Calvat's Australian Gold," under which name it will be catalogued and sent out by him.

Chrysanthemum Mrs. H. Weeks.—This very handsome and massive Japanese variety is an English-raised flower and said to be a cross between Puritan and Mrs. Alpheus Hardy. It certainly does not partake of the latter weakly grower in habit, being of extra strong growth. The blooms are composed of numberless long, wide and thick florets, which droop and slightly curl at the tips. The colour is white, faintly tinged pink towards the centre of the flower.



Gymnogramma triangularis. From a photograph by Miss Willmott, Warley Place, Essex. (See p. 437.)

Orchids.

SEASONABLE NOTES ON ORCHIDS.

The dullest months of the year are now past as regards Orchid flowers and the houses have quite a gay appearance, owing to the number of species in flower. Perhaps the brightest bit of colour of all now is the pretty Sophronitis grandiflora, the plants having made a capital growth and flowered more freely than usual. There is a great difference in the tints of colour where many plants are grown, and although all are very effective, none can compare with the bright scarlet type, usually characterised by its longer thinner pseudo-bulbs. I say usually advisedly, as I have been deceived on at least one occasion by the appearance of the plant, and only found out my mistake when it flowered. Well-established plants, it may be noted, bloom much more profusely than newly-imported or semi-established ones, so that growers who may be flowering the latter for the first time must not be surprised if the amount of bloom does not quite come up to their expectations. Such should endeavour to strengthen their plants as much as possible by removing the blossoms before any sign of distress is apparent, treating them well during the ensuing season. There is no need to enumerate the many fine Orchids now in flower, as notes on several of these have recently appeared in The Garden, as

well as a capital and very useful list on p. 391, November 23. But there is one point in the arrangement of the flowering house that it many ot be out of place to notice, and that is the varied effects that may be produced, even with the same plants, by moving and re-arranging in an altered style. It is too often the case that plants are taken to the house in question and arranged—it may be very naturally and tastefully—but there they remain in the same, or nearly the same, position until the blooms fade, visitors seeing them day after day until they are tired. Now, it is a very simple matter to avoid this sameness by the plan mentioned above. For instance, supposing a group of plants arranged in the usual way with Cattleyas, Odontoglots, Cypripediums and others in mixture, with spikes of Calanthe Veitchi or some similar kind rising in prominent positions to break the lines and prevent any possibility of flatness, careful and thin arrangement and a judicious blending of the colours render such groups very attractive. A change may be made from this by breaking up the group, so to speak, into three or four mounds, each being composed of one or the other species and suitable greenery, massing the plants so as to make a fine display of colour, and arranging any that by reason of their miscellaneous character cannot be grouped between the mounds referred to. A still further variation will be made by altering the position and shape of the mounds, or by keeping one kind as a groundwork and dotting other kinds irregularly amongst them or in any other way that occurs to those in charge of the work. This makes the most of the material at command, and also keeps up the interest of visitors. More fire-heat has now to be applied in the flowering house, and as much damping is inadmissible, insects sometimes make headway upon the plants while there. It is a good plan to look them over carefully after flowering and before returning them to their various houses.

The work is now chiefly of a routine character, and consists in keeping the temperatures regular, damping judiciously, but not too abundantly, and giving as much air as possible without unduly lowering the temperature. With regard to watering at the roots, everything depends upon the species and the state of growth. Cattleyas of all kinds will need greatly diminished supplies, small plants of course requiring more attention than those of a larger size and having a greater body of compost about them. Where such as C. Aclandiæ, C. Walkeriana and others are grown on blocks only lightly dressed, watch carefully for or rather anticipate the first signs of distress, as it is not easy to bring these into a healthy condition when once they are badly shrivelled under cultivation. The kinds that require most water are those which grow late in the season, including C. Mossiæ, several plants of which are still unfinished, and many of the intermedia and guttata types even now rooting freely. Besides these there are several that, owing to the great heat during September and early October, started to grow out of season. Lælia purpurata too is in full growth, and should have the lightest and warmest position with plenty of water when the weather is bright. The Mexican kinds are nearly all at rest, and are kept well on the dry side and cool, especially L. majalis, the most beautiful of this section. The later Dendrobiums are now about finished, such kinds as D. macrophyllum and D. Dalhousianum now showing the terminal leaves. The buds are well advanced on D. Wardianum, D. nobile, and D. aureum, and successional plants of all these may now be placed in heat. There is no need to water them much at the root, as the old pseudo-bulbs contain plenty of nourishment as yet. Woodlice and small snails are apt to be troublesome at this season by eating the soft and tender flower buds as they appear at the nodes. These must be trapped by placing pieces of potato about the plants and examining them daily, also searching at night with a lantern, or the loss of some flowers is almost certain. The deciduous kinds now in the cool house having lost all their foliage may be kept quite dry, that is if they have been properly ripened, as no shrivelling of the pseudo-bulbs will take place. Overwatering in winter is frequently the cause of failure with D. Bensoniæ, D. Parishi, and several others, as may be seen in the spring by the loss of roots. With the evergreen kinds such as D. densiflorum and allied species it is different. These must not be quite dried off, but at the same time they do not require more than is absolutely necessary to keep the pseudo-bulbs plump. They are safest in a house that does not fall much below 55° at night, except when very cold outside. The earlier Pleiones as they go out of flower must be repotted, but as they have been very recently noted it is not necessary to go into details upon this point. Suffice it to say that the sooner they are potted after flowering the better, and that the greatest care is needed in watering afterwards. The cool house is now beginning to get more interesting, especially where plants are flowering for the first time. Here also a watchful eye must be kept on the spikes, as they are an irresistible attraction to slugs. Any of the well-known methods may be resorted to, but be sure and be before them, or the result of one night's depredations may mean the loss of many spikes, and thus a season's growth and trouble will be thrown away. If not already done, Disa grandiflora should be repotted without further delay, as the new roots are, or soon will be, starting, and it is well to anticipate these. Considerable care must be taken with this Orchid both in cleaning and draining the pots and the preparation of the compost, as upon these and other seemingly unimportant details much depends. Requiring so much water at the roots while growing, the medium for these must be lasting. The roughest and best of peat fibre must be mixed in equal proportions with fresh growing Sphagnum, and plenty of good rough lumps of charcoal and crocks should be added as it is placed in the pots. The leaves should be damped over lightly with the syringe several times daily, and when the roots are running freely, plenty of water must be given.

All the temperatures as given last month will be suitable, but the night temperature may drop a little on very cold nights rather than press the fire-heat too strongly. R.

Odontoglossum Cervantesi.—The varieties of this pretty Odontoglot are again flowering, the large and beautiful O. C. decorum being prominent amongst them for its great size and substance. The flower of the typical form is about 2 inches across, the sepals and petals rosy white with basal stripes and dots of reddish brown; the lip yellow at the base and also marked like the sepals. It is a native of Mexico, and thrives well in a cool, moist house close to the glass. It may be placed in small shallow pans just large enough to allow of about an inch of peat and Moss being placed around the plants, and requires abundance of water at the roots all the year round.

Cattleya superba splendens.—I have sent you a spike of Cattleya superba splendens. The flowers, five in number, are very sweetly scented and of good colour. The plant has been in the Sharcombe collection of Orchids for several years, but this is the first time it has bloomed. It has been grown in a hanging basket in the stove and seems to do well with the treatment.—C. Mounsdon, *Sharcombe Gardens, Wells.*

*** A remarkably handsome Orchid. In the variety sent the flowers are larger and the sepals and petals longer than in the type. The sepals and petals are deep purplish rose, the lip white at the base, rich crimson in front, with several lines of golden yellow running along the middle. It forms a fine companion to the typical plant when the two are grown together.—Ed.

Cattleya aurea.—I have sent you per to-day's post a bloom of Cattleya aurea for your opinion. It seems to come near to C. aurea (Young's var.). The bloom is one of two on the spike from an imported plant just established, and will probably improve.—Hugh J. Hunter, *Edinburgh.*

*** The flower of Cattleya aurea sent is a magnificent variety, large and brilliantly marked. It is not the variety you name, but it is equally beautiful. The yellow side blotches on the lip are exceptionally rich and deep, and the marginal band of rosy purple stripes gives the flower a very distinct appearance. Being rather late in the season for this variety, I have no flowers with which to compare it, but do not hesitate to pronounce it one of the very best varieties in existence, especially if, as you suggest, it improves under cultivation.—H. R.

Extraordinary plant of Dove Orchid.—During the summer mention was made in the columns of The Garden of a plant of Peristeria elata having a flowering stem furnished with twenty blooms, this being thought by the writer to be an exceptional occurrence. At that very time might be seen in a small plant stove at The Grange, Winthorpe, near Newark, the residence of Mr. J. S. Branston, a plant of the same Orchid carrying two stems, one about 5½ feet and the other a foot or so less in height, and having on them forty and thirty flowers respectively. The stems were as large as ordinary walking sticks, the leaves of immense size and of a fine green colour, while it is almost needless to say the individual flowers were correspondingly fine. The plant, growing in a pot some 12 inches in diameter is, I believe, potted principally in loam and open material. It is fortunate that Mr. Dench, the gardener, has two other young plants coming on which look remarkably healthy, as the great strain put upon the energies of the parent plant in perfecting two such abnormal flower-stems has had the effect of lessening the size of the present year's bulbs.—J. C.

Dendrobium aureum.—This species is to some extent looked down on by Orchid growers, owing probably to its small size, but its many good points ought to secure for it a place in the most limited collection. It takes up very little space, produces a very good flowering return, and is besides cheap and easily grown. The flowers are produced from the nodes after the leaves have fallen in short side racemes of about two or three. These last long in beauty and are sweetly scented, the fragrance resembling that of Violets. D. aureum may be grown in pots or baskets in a mixture of peat and Sphagnum, with plenty of small crocks and charcoal added. If placed in pots the base of the leading pseudo-bulb may be kept slightly above the rim, and the compost must be arranged in a cone-shaped mound, from this bedding it firmly and neatly trimming off all ragged ends of peat. The best time to repot is early spring when the new growths are appearing, and the plants must be placed in a light, sunny position in the East India house. The roots are vigorous when once they obtain a hold of the compost, and when growing freely require plenty of water. The pseudo-bulbs are usually complete soon after midsummer, and they must then be placed out of doors in full sun for a few weeks to thoroughly harden them, well-ripened bulbs being the sure forerunners of a bountiful crop of flowers. After the foliage has fallen very little water will be needed, and the plants are well suited if given a place in a vinery from which which early fruit has been taken or any sunny greenhouse until the

nodes begin to burst, when they may be returned to the warm house and will rapidly form flower-buds. The blossoms are light primrose with velvety crimson markings on the lip. It is a widely distributed plant naturally, being found in various parts of India and Ceylon, and was introduced into this country in 1837.

Angræcum Scottianum.—The small-flowered section of this genus is a very pretty and interesting set of plants, and the above is no exception to this. The leaves are small, little more than 3 inches in length, the flowers pure white, about 2 inches across, usually produced during the autumn and early winter months. This plant does well in small teak-wood baskets, with a few large pieces of charcoal and a little Sphagnum Moss about the roots. The greatest care is needed in fixing the plants. If this is done and they begin to root freely, they are sure to do well if properly treated in other ways, but if rocking about with the least vibration, the roots cannot get hold of the baskets or their contents, and consequently the plants become sickly and lose their leaves. Though not so fond of sunlight as many Orchids, too much shade is not advisable, as this tends to a soft and ill-conditioned growth, that rarely produces anything like a flowering return. The happy medium, then, is what must be aimed at not only in this, but also in watering. The appearance of the species shows that it does not require drying off while at rest, but too much water during this period must be guarded against. A safe plan is to let the Moss be quite dry before giving a fresh supply during winter, in summer keeping it always green. It is a native of the Comoro Islands, and must be grown in the warmest house.

STOVE AND GREENHOUSE.

CARNATIONS IN POTS.

THE self or border Carnations that naturally flower during the summer months are just as well adapted for pot culture as are the tree or winter-flowering and Malmaison types. The illustration here given shows a finely grown and well-flowered plant of the popular Carnation Mrs. Reynolds-Hole carrying twenty good flowers in various stages of expansion besides numerous buds, and is a very different kind of pot plant from those some of us are familiar with by seeing them so often at the annual Carnation show. The Carnation Society, however, moving with the spirit of the times, now provides a class for pot plants not so closely disbudded and stiffly tied, whilst much might be said in favour of growing Carnations more extensively in this way. It gives an alternative course to those who, from peculiarities of soil or situation, are not successful with this flower in the open ground. Pot plants are under the most perfect control of the grower, and his success is in proportion to the cultural skill brought to bear upon them. They may be specially commended to the attention of those who have unheated frames or houses, as pot culture of open-air kinds does not imply or suggest forcing, a system of treatment that these Carnations resent. The variety here shown, however, and any other standard kind grown in this way may be brought into bloom a little in advance of the plants' natural flowering season outside if that is desired by keeping them under glass throughout, always allowing an abundance of air, or the flowering may be retarded to the usual period by keeping the plants in the open air from the warm spring days onwards.

Tulip Chrysolora.—I consider this by far the most useful early forcing yellow Tulip. Canary Bird bears the reputation of being slightly earlier, but the difference is so very trifling as not to be worth notice. Canary Bird has one fault, that of being rather weak in the stem, and as it usually grows to a good length the flowers are liable to droop when cut and placed in water, instead of keeping erect and showing their full beauty. Chrysolora, on the other hand, has a stouter habit and holds itself erect, the individual flowers also being much larger than those of Canary Bird, although perhaps not quite so brilliant. I use this Tulip largely in January for table decoration, the rich golden colour being very effective by artificial light. It is not quite so expensive to buy as Canary Bird.—J. C.

Notes on forcing shrubs.—In many gardens preparations will now have to be made for forcing various hardy flowering shrubs. No place answers better than an old-fashioned vinery having a pit in the body of the house, as this can readily be filled with Oak or Beech leaves, and thus a genial top and bottom-heat afforded. Of course, any convenient house, such as is used for growing Cucumbers and Melons in, will do, provided the bed of leaves can be supplied, as when grown without a genial bottom-heat thus early in the year poor results generally follow. Lilacs may be flowered in a dark Mushroom house, but under such conditions the heads of bloom are small and poor. The earliest batches of the beautiful Ghent Azalea are better for a gentle warmth at the roots, and in January, Rhododendrons, Kalmias and kindred subjects used for standing in front halls or at the foot of staircases need the same rooting medium in order to secure the fullest development both of foliage and bloom. The well-known Deutzia gracilis, also the larger-growing single and double varieties, are quite at home plunged in a warm, moist vinery, a free growth being further encouraged by the spray from the syringe when the Vines are moistened twice daily. At the new year the red and white forms of flowering Currant force readily if bushes which are grown in the home nursery for two years are employed. Care must be taken not to plunge fully any plant brought into the house as soon as the pit is filled with new leaves, or excessive heat will burn the roots. The pots should be stood on the surface of the bed until the heat declines, when half plunging may be ventured upon. Andromeda floribunda makes a good showy subject for house-furnishing at a time when flowering specimens of stove and greenhouse plants are few. The bed usually accorded to Vines at starting time suits these shrubs well. If it is desired to have white Lilac, plants of Charles X. may be covered with boxes or even hampers with mats thrown over them.—J. C.

MR. SANDER'S NURSERY AT BRUGES.

JUST on the outskirts of the quaint old Belgian town of Bruges and by the road that, between a double avenue of Poplars, leads to Ostend, Mr. F. Sander, of St. Albans, is forming a nursery that promises to exceed in area and scope his well-known St. Albans establishment. At Bruges an attempt is being made to utilise certain local peculiarities of soil, situation, and climate to the fullest extent in the cultivation on an extensive scale of certain plants more or less always in demand. I lately had an opportunity of looking through the Bruges nursery, which has only been started about twelve months, and although it is at present in an unfinished state, there are tens of thousands of plants already happy in their new home, for as fast as any range or block of houses is finished the available space is immediately stocked. Orchids are a prominent feature of the place, not, however, from the point of view of rarity, but in the wonderful numbers of certain well-known species or varieties grown to meet the demands of the large cut-flower trade that is done in them upon the Continent. One house is entirely filled with Dendrobium Phalænopsis, and 10,000 ra-



Carnation Mrs. Reynolds-Hole in a pot. From a photograph sent by Mr. J. C. Smith, Nandana, Penrith.

cemes of bloom were all expanded at one time. This Orchid entirely fills one compartment of a long range, this division alone being 50 feet in length. They fill two central stages each 6 feet wide, two side stages, both more than a yard wide, are packed with plants, and numbers besides hang from the roof, whilst the flowers embrace every conceivable variation of colour that characterises this most graceful of Dendrobiums. D. formosum giganteum was also flowering in great numbers, the finer spikes having five and six flowers each. Cypripediums by the thousand were seen, also houses entirely filled with Cattleyas, such as C. labiata, C. Mendeli, C. gigas, and C. Sanderiana. Another 50-feet compartment was filled with Cypripedium insigne forms, and Oncidium tigrinum was sending up hundreds of its bold flower-stems. Another block of houses devoted chiefly to Odontoglossums, but containing besides some other cool Orchids, had a roof of nine or ten spans, but internally the block was open throughout, thus admitting of a good circulation of air about the plants, which are arranged upon imperishable stages. There must have been many thousands of plants in this range. The stages are unique, simple, and, one might say, everlasting. Upon a framework of iron supported by iron legs, transverse bars of light T-shaped iron are laid at a sufficient distance apart to carry tiles of about 10 inches square and 1 inch in thickness, such as are used for tiled floors. These tiles rest upon the flanges of the bar on either side, and a durable, most efficient stage is the result.

Belgium, as is generally known, supplies most of the little Azaleas that come to this country bristling with flower-buds—are forced, go to market, and doubtless mostly perish afterwards. A seven-span block of houses was seen filled with these alone, the plants planted out on the benches. The Azaleas alone numbered something above 20,000. The largest houses are devoted to Palms, whilst others still larger are in course of erection for them. It would be useless to even hazard a guess as to the numbers in every stage, from the tiny seedling to the larger plants, in which trade is so regular and constant, that they are subject to no fluctuating variation of prices, but they are quoted *pro rata* according to the number of leaves they possess. Latania borbonica is the leading Palm, as it is one of the specialities of the Bruges district, and the houses have been specially constructed for its growth, with central tan beds in which the plants are plunged, whilst upon side stages other sorts are grown. Some of the future Latania houses, of which the walls are completed, have been made of sufficient width to admit of two plunging beds, with a central as well as two side paths. Other Palms noted in great numbers were Kentia Belmoreana, Areca sapida, Areca lutescens, Cocos Weddelliana, Phœnix canariensis, a magnificent lot, and the new and striking kind, Bentinckia nicobarica. One house contained many hundreds of Araucaria excelsa, this being a favourite pot plant on the Continent and one largely grown in this district.

An important industry round about Bruges is the growth of the Sweet Bay, the use of which enters into the social life and customs of continental nations to an extent that a visitor to these parts learns of perhaps with somewhat of surprise. I was informed that at the crowning of the late Czar of Russia, Bay to the value of £2000 was sent to that country, and it is calculated that more than double that amount will be expended in Bay at St. Petersburg alone next spring. It is calculated that there are one million Bays in the vicinity of Bruges, and although soil and situation favour its growth, the winter is too severe for the plants; consequently they are all grown in pots or tubs and lifted and stored in sheds or other cool airy places for the winter. There are old specimen plants about Bruges that are absolute heirlooms and have been in one family for quite half a century. Even artisans and others in no way connected with the gardening or the nursery trade grow Bays and seek to supplement their regular earnings. Mr. Sander likewise intends to grow Bays largely, and a propagating house built specially for them was filled with cuttings, which numbered thousands, all nearly rooted without a single blank or failure. Within a fortnight this batch would be removed and another inserted. Even the trimmings of the trees that cannot be utilised as cuttings are a marketable commodity, always saleable by weight to use for flavouring or distillation.

A Traveller.

BEGONIAS AND SONERILAS AT ST. ALBANS.

Two classes of plants that Mr. Sander has latterly taken in hand and largely added to are Begonias, of which he has raised a set of handsome-leaved, free winter-flowering kinds, and Sonerilas, which have been greatly improved by intercrossing the two or three previously existing species. As regards the Begonias, Mr. Sander sought to get a race with the lovely leafage of the B. Rex type, combined with a freer flowering character than was ever manifest in any of the numerous varieties in this section of the Begonia family. In this he has been successful, and the progeny that has resulted from crossing B. socotrana with the B. Rex varieties shows a distinct advance in the right direction. Large groups of some of these varieties are gay in the St. Albans nursery at the present time. The influence of B. socotrana is apparent not only in the improved flowering qualities of the plants and the appearance of the blooms during the winter months, but the size of the leaves has been lessened and the habit of the plants greatly improved. The elegant shapes and varied markings in a beautiful harmony of silver and green are very marked in these new kinds, and above the leaves rises a profusion of spikes bearing flowers that in different kinds embrace soft shades of pink, pale buff, fawn-yellow and other tints. The following varieties we specially noted: Winter Favourite has pretty undulated leaf-edges; the centre of each leaf is of a silvery colour, which merges into a bronze-green, the outer zone of rich deep green being studded with pearl-like dots; its flowers are a light fawn-yellow. Winter Perfection is a gem, its leaves tinted with a silvery sheen, which forms a transparent tint overlying the deep green body colour of the leaf, the margin being bronzy red; its flowers of a distinct soft shade of creamy pink. Others equally charming are Winter Beauty, Winter Charm, Winter Cheer and Winter Jewel. Another set of plants Mr. Sander has classed as pillar Begonias, the characteristic feature being a tall habit of growth, which adapts them for training up pillars or for use in the several ways in which stove and greenhouse climbers are used. They would also make grand specimen plants grown on in large pots in the same way, for example, as we see Begonia metallica at Kew. In this state they would rival Crotons and Dracænas. In this set we made note of The Queen, quite shrubby in growth, with tapering leaves of a metallic red, the leaf-veins prominently picked out in deep green, the flowers coral-pink, disposed in large racemes. Princess of Wales is another superb kind, its leaves deep green, blotched with silver-grey and prettily spotted with salmon-rose, the drooping clusters of rosy pink blossoms in charming combination with the variously-tinted leaves. Prince of Wales has leaves of a sea-green, shaded with a glaucous tint and flushed with soft pink, the leaf-veins clearly delineated in green. Duchess of York, Duke of York and Duke of Cambridge complete this set, these latter three also most distinct in leaf colour.

The new Sonerilas are as beautiful as the Anæctochilus, with this advantage, that anyone who wishes can grow the former, not nearly so much skill being required nor are any special conditions needed beyond those furnished by a warm stove. These new kinds were as fine as the Begonias, improvement in them also being apparent all round in free growth, increased size and varying colouring of the leaves, and the brightness and profusion of their flowers during midwinter. Mr. Sander grows them in pots, pans and baskets. Some of them we saw suspended looked particularly pretty. Some of the best of these are Silver King, with stout, broad, silvery leaves and rosy pink flowers; Victoria, leaves quite 4 inches long, rich greenish bronze, with silvery centre, the margin metallic, green spotted with white and bearing rosy flowers in great abundance in crowded clusters. The leaves of Mrs. H. Walters are long, the deep green ground of these being veined with red and spotted white. In Mr. H. Walters the leaves are reddish green with white centre, white spots being distributed over the leaf surface, the flowers rosy pink, borne in amazing profusion. These two latter kinds received awards of merit from the R.H.S. last year. Besides those here mentioned there are nearly a dozen others grown at St. Albans all more or less distinct.

Potting Lilies.—I think it is now generally admitted that the autumn is the best time for repotting Lilies of the lancifolium section. As soon as the leaves fall I always cut the stems off the plants to within 6 inches of the base, and when this has partly decayed, repot in good holding loam, manure, free from worms, and a sixth part mortar rubble or road grit, draining the pots thoroughly and placing five bulbs in a 12-inch pot, merely covering the crowns. If the soil is fairly moist, no water is needed until growth commences in spring, and the pots may be stood in any convenient corner, not necessarily in the light, for the rest of the winter. Formerly Lilies of this class were usually potted when growth commenced in spring, during which operation it was impossible to avoid damaging some of the new roots.—J. C.

Public Gardens.

CHRYSANTHEMUMS IN THE PARKS.

Battersea Park.

Mr. Coppin, the superintendent at Battersea Park, has provided in a large span-roofed greenhouse 110 feet by 25 feet a broad sloping bank of plants that have been in full bloom since early last month. Although every attention is given to the production of large flowers, yet the collection is here and there enlivened with the lighter and more artistic feature of bush-grown pompons and free-flowering Japanese, which lend a special charm to the exhibition. Varieties successfully used for this purpose are the well-known Golden Mme. Marthe, Sœur Mélanie, Precocité and Sunset in the first named section, while Margot, an old favourite, is employed in the other. A striking feature in the County Council Chrysanthemum shows is the number of high-class, old-fashioned sorts that are kept, and a visitor to the big societies' shows and the trade displays will find that many varieties once popular, but seldom met with in the ordinary way, will be found in the collections in the public parks. Additions of novelties are of course constantly being made, but it is evident that a rigid selection is exercised, and the result is that novelties are not added merely because they are novelties, but because they are really meritorious. Dealing with the older sections and taking the incurved first, it may be said that these are all well done—Prince of Wales,

Queen of England, John Salter, Lord Wolseley, Mr. Bunn, Beverley, Alfred Salter, Geo. Glenny, Emily Dale, Jardin des Plantes, and many others well maintaining the reputation of the old show type set up forty years ago or more by the little band of Stoke Newington enthusiasts who were then unconsciously laying the foundation of the largest special society in the country. Some Anemones are grown, one of the best being M. Chas. Lebocqz, a pale yellow variety well known to exhibitors; Delaware, white and yellow, is also in good form. The reflexed section is represented by some good blooms of Dr. Sharpe, Cullingfordi, King of Crimsons, well known bright-coloured flowers eminently suitable for placing in large groups. The weird, fantastic Japanese of course at Battersea, as everywhere else, claim the premier position both in numbers and in colour. Vice-President Calvat is largely grown, and its massive crimson and gold heads of bloom are constantly recurring. Mme. Carnot, the fine new white Japanese, is also good, while Louise, received from the same raiser, proves its title to be one of the grandest introductions of recent years. Crimson varieties like J. Shrimpton, Gloire du Rocher, Beauté Toulousaine, G. W. Childs, &c., help to give tone to the Battersea collection and are judiciously interspersed with paler, but equally fine examples of cultural skill, such as W. Tricker, Etoile de Lyon, Viviand Morel, Puritan, Mr. A. H. Neve, Viscountess Hambledon, Mlle. Marie Hoste, Florence Davis, Eda Prass, Stanstead White, and all the other leading white and pinkish shades of popular Japanese. President Hyde, a rich golden yellow reflexed Japanese, helps to give tone to the group, and is dotted here and there throughout the whole collection, and that charming little pompon perfect in form, and always much admired, Mlle. Elise Dordan, is employed very usefully to lend variety to the blaze of colour so conspicuously sent forth by the blooms of the larger sections. Hamlet, an old favourite, a beautiful salmon-rose, seldom or never seen at the shows, is worthy of a note, and so, too, is Comte F. Lurani, often mentioned in The Garden as valuable for this purpose. Lord Brooke, a deep golden chestnut, Miss Dorothy Shea, Mrs. Falconer Jameson, Val d'Andorre, Col. W. B. Smith are all of approximate tones when displayed in this way. Purple and amaranth shades are best found in such old favourites as Edouard Audiguier, which we have long regarded as extinct and were pleased to meet once more, not having seen its richness of colour and elegant drooping florets for many years, in A. Lunden, President Borel, and C. Sharman. J. S. Dibbin, a large yellow Japanese, and Source d'Or, always rich and attractive, are close to old Boule d'Or, whose heavily grooved florets and deep tone of yellow look rather greenish in such company. M. William Holmes is a valuable crimson intermediate Japanese for October displays. Le Verseau is a Japanese, most distinct in colour, being of a bright rosy pink, shaded carmine, and largely grown at Battersea for effect. Robt. Owen, Gloriosum, Mlle. Mélanie Fabre, a pretty dwarf pink Japanese, introduced many years ago, Mlle. Thérèse Rey, Charles Davis, Col. Chase, and some others of recent introduction all tend to interest not only the general public, who are said to have numbered something like 200,000 last season, but also the local grower who seeks to keep himself in close touch with the best novelties of the season.

Southwark Park.

This park is situated in one of the most densely populated neighbourhoods of London, and the Chrysanthemums there under the charge of Mr. Curle prove the oft-repeated saying that the flower is pre-eminently a town flower. At the time of our visit there were about 2200 plants in bloom, although the number earlier in the season was greater by several hundreds. They are all very prettily grouped in a T-shaped span-roof greenhouse, a bank occupying the entire middle of the structure, with a narrow border of dwarf plants running round the sides, thus forming a path which leads the visitor back to the door from which he entered. Palms, Ferns and fine-foliaged plants are nicely arranged amongst the Chrysanthemums, and climbing plants and creepers are trained at intervals under the roof, and when the Chrysanthemums are over the greenhouse containing them is rearranged with other subjects and kept open daily as a winter garden till the month of May. The approach has been widened, and consists of a broad gravel path, with rockwork mounds on each side studded with suitable subjects, and is an attractive addition. Here again, as at Battersea, the public flock in great numbers, as many as 9000 people passing through the house on a Sunday, and here, too, the Chrysanthemum fancier will find a wealth of material in the shape of good old standard varieties, although novelties at the rate of seventy or eighty per annum are added to the collection, which comprises a very large number of varieties in all sections. Fair Maid of Guernsey and Elaine are in good condition, and for white Japanese remained very long on the show-boards of our leading exhibitions. Condor, too, is still to be found at Southwark, although recent competitors for public favour, like Mme. Carnot, Mlle. Thérèse Rey, Rose Wynne, are vieing with them for supremacy. There are other white Japanese like Mrs. J. Wright, Puritan, Mlle. Marie Hoste, Florence Davis, Florence Piercy and Stanstead White all in equally good condition, and many of the pale pink or lilac varieties have, now that the season has advanced, assumed a paleness of tint that would lead the uninitiated to class them in that category, viz., Good Gracious, Mme. E. Rey, M. E. A. Carrière, Louise, Mr. A. H. Neve, and the like. The Japanese mostly in evidence at Southwark, and remarkable for their fine blooms, are Charles Davis, Puritan, Louise, Gloriosum, Col. W. B. Smith, Wm. Seward, W. K. Woodcock and Edouard Audiguier, but beyond these there are some capital examples of Sunflower, the yellow Japanese, Richard Dean, crimson and gold, Miss Ethel Addison, Excelsior, Silver Cloud, Mme. Baco, William Tricker, Violet Rose and Viviand Morel. Golden Gate, a fine new yellow Japanese, is large and striking, and the golden yellow Duchess of Wellington, a fully-incurved Japanese, is too. Miss Maggie Blenkiron and Lord Brooke, golden chestnut and belonging to the same section, are also large and fine. Boule d'Or, Val d'Andorre, Source d'Or and Robert Owen all attract the visitor's attention and need no description here. Richly coloured Japanese of purple or amaranth shades are found in Th Denis, R. C. Kingston, a deeply-built Japanese incurved, Duke of York, Excelsior, Commandant Blusset, and others too numerous to mention individually. Then in crimson and crimson-bronze shades, Edwin Molyneux, still one of the most attractive, Wm. Seward, deep in tone and velvety, Cesare Costa, G. W. Childs, H. Jacotot fils, The Cossack, seldom seen now-a-days, and Joey Hill all add to the brilliancy of the display. In one corner of the building a curious and interesting group of hairy varieties, comprising about a dozen of the best of the type, are shown, the famous Mrs. Alpheus Hardy, white, Louis Boehmer, the pink variety, Prima Donna, King of the Hirsutes, Hairy Wonder, Sautel 1893, W. A. Manda, and Souvenir de l'Ami Coye being the best, all of them having on several occasions been fully described in the columns of The Garden. Incurved are very numerous and well done: Lord Alcester, Miss M. A. Haggas, various members of the Queen and Rundle families, Baron Hirsch, Gloria Mundi, Hero of Stoke Newington, Violet Tomlin, Guernsey Nugget, Mr. Brunlees, Prince of Wales, Prince Alfred, the newer Chas. H. Curtis, finely formed and of a pure pale yellow, Mr. Jay, Lord Derby, the Beverleys, and others. Some reflexed, but principally the highly-coloured crimson Cullingfordi and the purple-magenta Dr. Sharpe, both of them introduced many years ago, are representative varieties. The large-flowering Anemone group comprise such standard sorts as Descartes, one of the most highly-coloured varieties we have, long ray florets and good disc of velvety vinous-crimson, speckled gold; W. G. Drover, a self-coloured variety, pale rosy amaranth; La Marguerite, small, but very dark purple-amaranth in colour; Prince of Anemones; Fleur de Marie and Lady Margaret, both white and well known. It must be an inestimable boon to the dwellers in such a neighbourhood to have such a floral treat close at hand, and great credit is due to the superintendent and his assistants for the very fine display they have provided.

Ipomæa rubro-cœrulea.—The value of this Ipomæa recently alluded to in The Garden is still further enhanced by the fact that it flowers during the autumn and winter months. Seeds of it are readily obtained, and if sown in the spring the young plants will grow away quickly and soon cover a considerable space. The temperature of a greenhouse suits it during the summer, but in the autumn and winter additional heat is required to see it at its best. There is a pure white variety, but the typical form from whence the specific name is derived produces blossoms of a charming, but almost indescribable shade of pale blue, that after expansion becomes suffused with red. As it grows freely and flowers profusely, this Ipomæa may be employed for draping the roof of a good-sized structure, and in this way it forms a charming feature. Where roof space is not available it may be trained around a few sticks, and thus form a bushy plant, and in this way a position may in most places be found for it. So treated the usefulness of the plant is to a great extent lost, but still it is very effective when studded with flowers, which succeed each other for a lengthened period. Rambling over twiggy bushes it is far more pleasing than if trained in any hard and formal manner.—H. P.

Societies and Exhibitions.

National Chrysanthemum Society.

December 3, 4, 5.

The last show of the above society for the present year, which opened at the Royal Aquarium on Tuesday, was in all respects a most interesting one. There was good competition in all the classes provided, and perfect freshness was apparent in all the flowers shown. The largest class on this occasion was that for twenty-four distinct Japanese in not less than eighteen varieties, and the class was well filled, there being nine entries. The first prize went to Mr. A. Haggart, gardener to Mrs. Johnston Foster, Moor Park, Ludlow, who showed a stand of blooms that would have done credit to any exhibitor even at a November show. The flowers were remarkably fresh, the finest being Etoile de Lyon, Mlle. M. Hoste, Mrs. W. H. Lees, Le P. du Bois, Lord Brooke, Duke of York, Beauty of Castlewood, Golden Gate, Robert Owen, and Mons. Pankoucke. Mr. H. Perkins, gardener to the Hon. W. F. D. Smith, Greenlands, Henley-on-Thames, was second, and Mr. W. Mease, gardener to Mr. A. Tate, Downside, Leatherhead, third. For twelve distinct Japanese, and with two more entries than in th previous class, Mr. A. Haggart was again firs with a superb dozen, the second place falling to Mr. W. Messenger, gardener to Mr. C. H. Berners, Woolverstone Park, Ipswich, his flowers being remarkably fresh and clear in colour, but a little smaller. Mr. Haggart was again first for six Japanese, the second prize falling to Mr. J. Aplin, gardener to Mr. W. M. Baker, Hasfield Court, Gloucester. In the incurved classes, Mr. W. Neville, gardener to Mr. F. W. Flight, Cornstiles, Twyford, Winchester, came in first for a dozen well-finished blooms, the best being C. H. Curtis, Mrs. R. C. Kingston, Lord Alcester, Mrs. R. King and Beauty. Mr. A. Haggart was second. There were eleven entries for six incurved blooms, Mr. H. Perkins being first with good blooms; Mr. W. Neville came second. In single varieties, twelve kinds, three blooms of each, Mr. G. W. Forbes (gardener to Mr. D. Nichols, Regent House, Surbiton) was first

with a fine lot, the second position falling to Mr. W. C. Pagram, gardener to Mr. J. Courtenay, The Whin, Weybridge. In small-flowered singles, Mr. A. Felgate (gardener to Elizabeth, Duchess of Wellington, Burhill, Walton-on-Thames) was first with a pretty lot.

Some interesting classes on this occasion were those for flowers shown in trios in vases and with a good length of stem. For twelve trios of Japanese, Mr. R. C. Notcutt, Ipswich, was an easy first, with superb blooms of every kind, those deserving special mention being Duchess of York, W. H. Lincoln (improved and much incurved as shown here), Niveum (a graceful incurved white), Challenge, Robert Owen (very fine), Rose Wynne and Golden Gate. The second prize went to Mr. H. Alderman, gardener to Mr. G. Hatfield, Morden Hill, Surrey. A similar class was for six bunches. Mr. W. Slogrove (gardener to Mrs. Crawford, Gatton, Reigate) was first, three blooms of his new kind (W. Slogrove) being conspicuous here. Mr. T. Tullett (gardener to Mr. G. Alexander, Warley Lodge, Brentwood) was second. For twenty-four bunches of any varieties, Mr. H. Perkins was first and Mr. J. Aplin second.

In the amateurs' classes, Mr. H. Love, Sandown, Isle of Wight, and Mr. E. Linfield, East Finchley, were successful in the order named for six distinct Japanese, and Mr. D. B. Crane, Archway Road, Highgate, was first for a large vase of Chrysanthemum flowers and foliage, Mrs. W. Green, Harold Wood, Essex, being second. There were eight vases shown in this class. Mr. Tullett, gardener to Mr. G. Alexander, Warley Lodge, Brentford, was first for six bunches of large flowered singles, and also first for the same number of small-flowered kinds, the second place in both classes falling to Mr. A. Meridew, The Gardens, Camberwell House, S.E. The St. George's Nursery Company, Hanwell, was an easy first for a collection of Cyclamens in pots, the second award going to Mr. J. McLeod, gardener to Mr. J. P. Morgan, Dover House, Roehampton. Mr. McLeod also showed the best dozen Cyclamens, Mr. W. Rapley, gardener to Mr. H. Grinling, Harrow Weald, being second. The best collection of Chinese Primulas was shown by Mr. A. Newell, gardener to Sir Edwin Saunders, Fairlawn, Wimbledon Common, Mr. J. P. McGregor, gardener to the Dowager Lady Hay, North House, Putney Hill, taking second place. Messrs. Newell and McGregor were similarly placed for a dozen Primulas, whilst the twelve best double-flowered Primulas and a charming lot came from Mr. W. Mease, Downside. Mr. W. Howe, gardener to Mr. H. Tate, Park Hill, Streatham Common, showed the best table of flowering, berry-bearing and fine-foliaged plants, a graceful arrangement of things in season

MISCELLANEOUS.

Among the non-competitive groups that from Mr. Jones was the centre of attraction, and a charming arrangement of Chrysanthemums rising out of a groundwork of Ferns, the surface broken up with graceful Cocos and highly coloured Crotons, the group well finished in front with Crotons, Ferns and Isolepis. The gold medal given to this was a fitting award. Mr. W. Wells, of Redhill, had a fantastic arrangement of Chrysanthemums and foliage, also a number of stands and vases of cut blooms, embracing Japanese, incurved and decorative varieties in quantity. He received a silver-gilt medal. Mr. R. Owen, Maidenhead, received a silver medal for several stands of cut blooms, mostly new varieties. J. W. McHattie, J. Macfee and Ada Owen, Japanese incurved, were fine, also Robin Adair, the new Japanese Anemone variety, and Major Bonaffon was represented by three well-finished blooms. Messrs. H. Cannell and Sons, Swanley, showed a number of good varieties, notably Mrs. F. Thompson, Australie, Princess May, and Marjorie Hoffman, but a greater attraction by far and a welcome variation to the show was the grand lot of zonal Geraniums shown by the same firm. The exhibit comprised about fifty bunches well displayed above a groundwork of Maiden-hair Fern. Some of the choicest kinds were Rosy Morn, Red Eagle, A. F. Wootten, Mme. Melba, Mme. Jules Chrétien, Sea Gull, Lord Farrer, Lady Newton, Duchess of Devonshire, and Duchess of York, this last perfectly white. A silver-gilt medal was awarded. Mr. Norman Davis had a fine display of cut blooms, a comprehensive exhibit embracing all sections, a silver-gilt medal being awarded. Mrs. Filkins, Le Rhone, Rose Wynne, Tuxedo, Golden Wedding, King of Plumes, and Golden Gate were noteworthy in this exhibit. Mr. Godfrey received a silver medal for an exhibit of new and choice kinds. H. W. Rieman, Duchess of York, Owen's Brilliant, L'Amethiste, and Bouqueterre were all charmingly shown. A large group of a dwarf and free-flowering white Chrysanthemum, useful for market work and shown by Messrs. G. Prickett and Sons, Stamford Hill, was awarded a silver medal. Messrs. Cutbush and Sons received a silver medal for a group of winter-flowering and fine-foliaged plants, and similar awards went to Mr. A. Meridew, Mr. J. Chard, and Mrs. W. Green, junr., Harold Wood, Essex, for table decorations. Vegetables from Mr. C. J. Waite, gardener to the Hon. W. P. Talbot, Glenhurst, Esher, were of fine quality, a silver medal going to this collection.

A meeting of the floral committee was held in St. Stephen's Hall, Royal Aquarium, on Tuesday last, Mr. T. Bevan occupying the chair. A large number of exhibitors presented novelties for adjudication, but there were no extensive displays, as at many of the previous meetings.

The awards made consisted of first-class certificates to the following varieties:—

MRS. C. E. SHEA.—A Japanese, with drooping florets, white, tinted sulphur. From Mr. A. Haggart.

GOLDEN DART.—A very attractive and valuable variety belonging to the decorative Japanese section, large in size, with long, flat florets, forming a starry-looking bloom; very free, and of a fine shade of pale golden yellow. An English seedling, raised and exhibited by Mr. E. H. Jenkins, of Hampton Hill.

KING OF PLUMES.—A small, decorative Japanese variety, a peculiar feathery-looking yellow flower. Shown by Mr. R. Owen.

Other novelties comprised some fine examples of Mrs. R. C. Kingston and Pearl Beauty, both considered to be too well known to be specially adjudicated upon; also Chamechaude, a violet-amaranth incurved of good form; Le Colosse Grenoblois, a large, globular Japanese, colour delicate rosy amaranth; and L'Amethiste, an incurved variety of a rich shade of violet-amaranth, which the committee desired to see again. J. W. McHattie, a fine crimson Japanese, was also asked to be shown on a future occasion. Several new American varieties—Mrs. W. Troy, The Egyptian, H. W. Rieman, &c.—though submitted in good condition, were passed over.

A meeting of the floral committee of this society was held on Wednesday, the 27th ult., at the Royal Aquarium, when Mr. T. Bevan occupied the chair. There was a good display of novelties, the principal collections coming from Mr. R. Owen, Mr. W. Wells, Mr. H. J. Jones, Mr. Weeks, M. Ernest Calvat, Mr. H. Briscoe-Ironside, and Mr. W. H. Fowler, J.P.

The following first-class certificates were awarded:—

W. SLOGROVE.—A large globular Japanese, rather loose in build and of incurved form; medium sized florets; colour deep golden yellow. Sent by Mr. W. Slogrove.

OLIVE OCLEE.—A Japanese incurved; florets of medium size, colour golden bronze, tinted purple. Exhibited by Mr. H. J. Jones.

SURPRISE.—This is a rather large Japanese Anemone, with flat ray florets incurving at the tips, good disc, a self-coloured variety, deep lilac-mauve. Also from Mr. H. J. Jones.

Mr. R. Owen was awarded a small silver medal for a capital collection of cut blooms arranged on boards and in vases. Bellem, a large rosy pink Japanese incurved, the committee wished to see again; also General Roberts, a large crimson-coloured Japanese. Mr. R. B. Martin, a long-petalled Japanese, yellow and carmine, and Miss Phyllis Fowler, a pale yellow incurved of good form, were also asked to be shown again. A similar request was made in respect to two of M. Ernest Calvat's seedlings, viz., Souvenir de ma Sœur, a large flesh-coloured Japanese, and Mme. J. Bernard, a deep rosy pink incurved Japanese. M. Demay Taillandier, crimson and gold, was large, but passed over. Songe d'Or, a rich yellow Japanese, very globular, was not considered distinct. Madeleine Davis is a large Japanese, with narrow florets of great length, pale rosy mauve, with a reverse of silvery pink. There were several other equally meritorious varieties, which will no doubt be presented on some future occasion.

NOTES OF THE WEEK.

Preserving the fruit of Pyrus japonica.—Mr. Kingsmill, seeing that people were doubtful about making jam of the fruits of Pyrus japonica, has sent us a specimen of this jam. It is really excellent, and in our opinion better than the ordinary jam made from many small fruits, having a peculiar and distinct flavour. Inasmuch as this Pyrus fruits abundantly in some places, and people seem to think the fruits of little value, this information may be useful.

An early Wallflower.—We send for your inspection a few blooms of Earliest of All Wallflower gathered from plants sown as recently as last May. The plants have been flowering since the middle of September, and are still full of bloom and bud, and, should the weather not prove too severe, they will continue to yield acceptable gatherings throughout the winter months, bursting again into new vigour and beauty at the first touch of spring. The value of such a pretty spring flower in December must be apparent to all, especially growers for the market. The flowers are delightfully fragrant.—SUTTON & SONS.

Snowdrops.—Mr. James Groom (p. 430) in his note on these flowers suggests that they resent the proximity of the sea. I think that their failure to flourish with him must be attributed to some other cause than the sea breezes, as the scene of the engraving (p. 395) is considerably less than half a mile from the sea. I am also acquainted with a garden not many miles distant where the Snowdrops luxuriate in a wild garden that literally overhangs the salt water. Both of the localities mentioned are, however, sheltered, the former from all winds and the latter from all but the south.—S. W. FITZHERBERT, *Torquay*.

Swainsonia Osborni.—At p. 300 I wrote of the above plant under the erroneous name of Swainsonia Veitchi, and hasten to make the correction. The facts are these: My informant, who is generally pretty clear with regard to nomenclature, had for the moment confused the names of Veitch and Osborn in his own mind. The name Veitchi came so promptly, however, that I did not myself examine the label, or the error would have been discovered on the spot. It is also a singular coincidence that on my challenging the accuracy of the name the gardener in question perceived the error. As S. Osborni is included under S. galegæfolia, it is quite possible, as surmised in THE GARDEN, that S. Osborni and S. galegæfolia alba are synonymous.—E. J.

Autumnal foliage.—I never remember seeing such a profusion of richly tinted foliage as there has been this autumn. Although the very severe frost of the last week in October ruined some of the more sappy-leaved subjects, it really seemed to improve others. The common Beech, for instance, has been quite golden, so has the Tulip

tree, while many of the Cratæguses have been remarkably beautiful. These last ought to be planted more frequently in parks or pleasure-grounds, nothing surpassing them for contrasting with the darker-leaved subjects. The leaves of the single Pæonies have coloured up more intensely than usual, and have been most acceptable for mixing with cut Chrysanthemums; in short, the whole of the above-named subjects are invaluable for the same purpose, and enable the gardener to reserve the various Ferns and trailers under glass for use later on.—J. C.

Lasiandra macrantha.—This, though an old plant, is seldom seen now, but there is none that can vie with it in its particular colour, a rich violet-purple, during the winter months. I lately saw a splendid plant covering 8 feet by 4 feet of a conservatory wall which was covered with blossom. The difficulty with this plant is to prevent its becoming bare on the lower portion, and only judicious stopping will avert this evil. With constant attention, however, its growth may be so supervised that the plant is well furnished from the base upwards. Sandy peat and loam form an acceptable compost, large plants, when once the border is well made, flourishing for years without requiring renewal of the soil. Small plants struck in the spring are very useful for conservatory decoration, forming a delightful contrast to Begonias, Fuchsias, Geraniums and the other summer occupants of the greenhouse. These young plants bloom at a height of 1 foot to 1 foot 6 inches, and produce their large, strikingly tinted flowers freely.—S. W. F.

Canarina campanulata.—A small plant of this singular Bellflower was exhibited at the last meeting of the R.H.S. The plant, however, was by no means a fair representative of this species, having only some three or four flowers open. To grow the plant well a rather liberal rooting medium is required, and if grown in a pot nothing short of a 10-inch or 12-inch one will do it justice. In such a size and in a warm greenhouse temperature the plant will soon cover a large space. It is best suited when trained near the glass. Loam, peat, and leaf soil in equal parts, one-fourth manure, and a little sand will suit it well so far as soil is concerned. The plant thoroughly enjoys a season of rest, and for this purpose, if convenient, it may be put out of doors when the growth is completed. Potting should be done as the growth commences, and at this time be careful not to over-water. When in full growth water may be liberally afforded, and weak liquid manure occasionally. Cuttings 4 inches long taken from the crown usually root freely in a dryish soil and not too closely confined.—E. J.

Yellow-barked Willow (Salix vitellina).—Planted close to the margin of one of the islands on the lake at Kew there is a group of this Willow. Cut back each year nearly to the ground, the stools send up a cloud of wands, whose bright yellow bark makes quite a bright and effective bit of colour, doubled as it is by reflection in the water. Salix vitellina is a British Willow, and, if allowed to develop, grows ultimately into a fair-sized tree. But when grown for the colour effect of its bark it is necessary to keep it in a shrubby state by pruning just before it commences to break into leaf. This should be done each spring, or at least not less seldom than every alternate one. Close by this is another Willow with red bark, also a variety of S. vitellina. A more extended use of these ornamental-barked shrubs in gardens for winter effect might very well be made. The red-barked Dogwoods (Cornus sanguinea, &c.) are very bright all the winter through, and in marked contrast to them we have several Brambles, among which may be mentioned Rubus biflorus and R. leucodermis, whose vividly blue-white stems are very conspicuous when devoid of foliage.

Cestrum aurantiacum.—When treated liberally at the root and given plenty of space for development overhead, there are few greenhouse plants which give a better return to the cultivator than this Cestrum. It is an exceptionally free-flowering plant and for at least half the year may be had in bloom; it is also of very graceful habit. The flowers are borne at the ends of the shoots and are closely packed in large panicles, their bright orange-yellow colour being most effective against the background of luxuriant deep green foliage. Like all the Cestrums and nearly allied Habrothamnus, this is one of the most easily grown of all greenhouse plants. It strikes as readily as a Pelargonium, and for a couple of years is useful as a shelf plant for the conservatory. It is so strong a grower, however, and requires so much soil and root-room, that its full beauty can only be developed when it is planted out in rich loam in a conservatory border. It requires support of some kind, and makes a very beautiful covering for the pillars of the house. It should be pruned back once a year, about the end of January preferably. A fine plant will grow to a height of 20 feet to 30 feet, but the species can be kept down to one-third those sizes by pruning, and is thus quite as well adapted for small as it is for large houses.—B.

Notes from Oakwood.—There is nothing remarkable to note about my Lilies this year. Lilium auratum was especially fine in rather damp soil in the wood and poor on the drier soil of the hill owing to the hot, dry weather. I think Eulalias are not enough grown; a good clump is always a pretty object; and when the autumn frosts cut the flowers that are out, Eulalias still show well for a time; besides the graceful leaves, the flowers make very pretty winter decoration. I bought some sent from Japan, not knowing what plant produced them till our Eulalia zebrina bloomed. This has flowered very well this season, and E. gracillima or univittata has had a few blooms with me for the first time. E. japonica has not flowered. I believe E. zebrina is the only one which can be relied on for flowers. The sharp frosts cut the Liquidambar a little; the leaves are beautiful, but not quite up to the usual colour. Aponogeton distachyon is flowering well. We have many Primroses and Gentianellas in bloom. Iris Vartani has been beautiful. Gaultheria procumbens clothing the side of ditches and on banks in full sun is always pretty, the red fruit taking the place of flowers. The North American Cranberry (Oxycoccus macrocarpus) at the side of a pond makes a pretty carpet, and the fruit is excellent stewed and in tarts—I think better, from being fresher, than the Russian Cranberries.—George F. Wilson.

Daphne Mezereon.—There is a little group of shrubs which even before the real winter commences give promise by their modest blossoms of its passing away, and the advent once more of spring and full flowertide. Among these, and anticipating even the Witch Hazels, is the Mezereon, of which both the purple and white-flowered varieties are in bloom. The earliest flowering of all the varieties is grandiflora, which commences in early October; it is not only distinct in this respect, but also in having larger and more richly-coloured flowers. Balancing these advantages, however, is the fact that it never produces the profusion of blossom characteristic of the smaller-flowered ordinary kind, which, although opening a few buds from time to time all through the mild winter weather, reserves its full display for February and March. The plant is rarely more than about 3 feet high, although old specimens may be sometimes seen twice that height. The question whether the Mezereon is a true native of Britain is a moot point. It is, at any rate, truly wild in several parts of the country. As a cultivated shrub it has latterly been too little grown, for the beauty of its flowers, its fragrance, and its neat, compact habit recommend it to every lover of hardy shrubs. It is not a particularly long-lived plant, a fact which explains the neglect that has overtaken it, and also implies the necessity of renewing the stock by an occasional sowing of seed, which it ripens freely.

The weather in West Herts.—Last week was a very mild one. The night preceding November 29 was especially warm for the end of that month, the thermometer in the screen never falling lower than 48°, which is about 4° higher than would be seasonable in the warmest part of the day. The exposed thermometer on the same night fell only to 47°—the highest reading recorded here during the previous ten years so late in the month. The temperature of the ground at 1 foot deep is now about 1° warmer than the average for the time of year. During the last eleven days of November the sun shone for altogether only about two hours, and on eight days no sunshine at all was recorded. The past month proved very warm—indeed, the warmest November for seven years. During the course of it there occurred only five unseasonably cold days, and but seven cold nights. Rain fell on nineteen days, and to the total depth of 4½ inches, or nearly 2 inches in excess of the mean for the month; the fall, however, was not quite so heavy as that in November last year. The rainfall for the last two months—which are the first two of the present drainage year—has been 7½ inches, or 1¼ inches in excess of the average for this period. No sunshine at all was recorded on sixteen days during the month, and the average record only amounted to about 1½ hours a day.—E. M., *Berkhamsted.*

Royal Horticultural Society.—The next fruit and floral meeting of the Royal Horticultural Society will be held on Tuesday, December 10, in the Drill Hall, James Street, Victoria Street, Westminster. The committees will meet as usual at 12 noon. An election of new Fellows will take place at 3.

National Rose Society.—We are asked to state that at the society's Crystal Palace shows in 1896 and 1897 the following valuable prizes will be offered for Roses raised, or first distributed, by Messrs. A. Dickson and Sons, Newtownards, Co. Down, Ireland. There will be a class for amateurs for six distinct varieties, and another for nurserymen for twelve varieties. In each case the first prize will be a handsome silver cup and £2, second prize £2, and the third prize £1. Each silver cup must be won twice (not necessarily two years in succession) before it becomes the property of the exhibitor. The above prizes are presented by an amateur member of the society, who wishes us to make these classes known now, in order that intending exhibitors may be better prepared for them next year.

Blue and yellow in flowers.—At p. 371 A. Hemsley says: "It is remarkable that yellow and blue are rarely met with in the same class of plants. The Pansies are the only instance I can recall where the two colours are found." There are also yellow and blue Columbines, yellow and blue Lupines, and yellow and blue Polyanthuses.—M. D., *Edinburgh.*

Mr. Barron's retirement.—We have been requested to invite the attendance (as largely as possible) of members of the fruit committee at the last meeting of that body for the year, which takes place on Tuesday next at the Westminster Drill Hall. On that occasion Mr. A. F. Barron retires from the office of secretary to the committee, a post he has held for many years. We understand that a special proposition relating to that retirement will be made at the meeting. We believe the sense of the members is strongly in favour of Mr. Barron being placed on the committee by the council as a permanent member, as in that case his unique knowledge will be still available.

—— We are pleased to learn that the council of the Royal Horticultural Society at their last meeting unanimously resolved to offer Mr. Barro an honorary life fellowship of the society, an invited him to serve on the fruit comm it for 1896.

Names of plants.—*Desperandum.*—Please say how your Ferns are grown.

Names of fruit.—*H. J.*—Pear Marie Louise.

No. 1256. SATURDAY, December 14, 1895. Vol. XLVIII.

"This is an Art
Which does mend Nature: change it rather; but
THE ART ITSELF IS NATURE."—*Shakespeare.*

CHRYSANTHEMUMS.

OUTDOOR CHRYSANTHEMUMS.

WHERE a lot of cut bloom is required after nearly all outdoor flowers are over and there is not sufficient house room for a great quantity of Chrysanthemums in pots, plants of the decorative section that are throwing up strong shoots may be saved instead of consigning them to the rubbish heap and stored away in cold frames with a view to planting them in the open ground early in the spring. I used to make such a planting in autumn, but this is rather a risky business, as, despite a heavy surface mulching, many plants would succumb if the winter that followed happened to be severe. A warm corner must be chosen for the plants, and as the autumn protection of the blooms is an essential feature in this outdoor culture the plantation should be formed under an extemporised framework, over which stout tiffany or cloth can be easily placed in case of frost. The ground having been chosen, a bit of fairly good manure may be run on, and it can be deeply dug, or, better still, bastard-trenched at any time during the winter months. The shoots of naturally dwarf varieties may be thinned, allowing the strongest to remain, and in the case of taller sorts two or three of the stoutest shoots may be pinched back about the end of May and sturdy growths saved as they come away from the base, that is if it is desirable to have the plants of one fairly uniform height. Firm planting is essential, and if the ground has not settled down well a good treading is advisable before the plants are put in. If a good surface mulching is put on at planting time, the plants will not require any further attention until it is time to stake them, unless the summer prove very hot and dry, when one thorough good soaking will be beneficial. As the conditions of growth are naturally conducive to a stiff, sturdy habit of both wood and flowers, it will not be necessary to devote much time to the staking, just sufficient support being requisite to prevent the plants from blowing about. The advantage of a sheltered corner is always apparent, especially in those seasons when heavy gales are experienced just about the time the flowers are opening, in exposed situations the plants would stand a poor chance. A little thinning of the flowers is advisable to secure fair-sized blooms, and such treatment always tends towards the earlier development of the blooms, a highly desirable feature. Capital varieties for the purpose (the list may be largely extended) are Bouquet Fait, Hiver Fleuri, La Vierge, La Triomphante, Source d'Or, Maiden's Blush, Lady Selborne, La Adorable, and Jules Lagravere among older varieties, and of sorts only tried for the first time W. H. Lincoln, W. Stevens, Mons W. Holmes, Bouquet des Dames, Alexander Dufour, and G. W. Childs are very good. Jules Lagravere is with me the hardiest of all Chrysanthemums. Plants that stood out in the open for ten years succumbed at last to the cold of February, 1895. It may be noted that it is not advisable to plant late varieties out of doors in the majority of seasons, as the flowers will never develop satisfactorily. Spare bits of wall may also be utilised for occasional plants. They can be easily protected, and will not fail to give a supply of flowers.

Claremont. E. B.

CHRYSANTHEMUM GROUPS.

No one could visit Chrysanthemum exhibitions during last month without being struck with the decided change and improvement that were apparent in the appearance of groups of Chrysanthemums arranged for effect. Not only is there a decided tendency towards associating with the Chrysanthemum suitable fine-foliaged plants to give relief to the brightly coloured blooms, but there is a marked difference in the manner adopted to display the blooms. Instead of huddling the plants so closely together that each one lost its individuality, the plants in many instances were quite isolated, and thus produced a pleasing effect. The necessity of having dwarf plants well clothed with foliage and carrying blooms of high quality is becoming patent to exhibitors who wish to earn a reputation and win prizes. No doubt the grand object-lessons displayed at some few of the leading exhibitions, notably Hull, have had much to do with bringing about a better state of things in this direction. One of the prettiest groups of Chrysanthemums alone that I have seen was composed entirely of single and pompon-flowered varieties. Instead of the lumpy effect caused by crowds of large blooms packed closely together in one solid mass, the graceful single-flowered blooms gave a lightness to the group easily imagined amongst choice selected pompons. The group in question was at the Havant show the last week in October. The step which Mr. Jones took at the N.C.S. exhibition in November of employing fewer Chrysanthemums and adding choice, well-grown Crotons, Palms, &c., was a wise one, and will have a strong educational effect in time to come. The group in question was by far the best yet seen in the south of England. I notice, however, in many instances this season a tendency to employ too many yellow-leaved Crotons. When this colour is in excess, the harmony with the Chrysanthemum blooms is not good, especially when yellow so often predominates as it does in Chrysanthemums.

For years the Hull executive have encouraged the tasteful display of Chrysanthemums along with other plants by offering substantial prizes—a sure means of encouragement. Few societies have such a building as the Artillery Barracks in which to display their groups as this society. Very often the space is far too limited to give effect to the arrangements. Instead of the flat, sloping bank-like method of arrangement so common at some shows, the exhibitors at Hull, without exception, arrange their plants in mound-like groups, giving to the whole a series of undulations. For instance, a perfectly healthy half-specimen Kentia Fosteriana or K. Belmoreana will be raised on a mound from 3 feet to 6 feet high, the base covered with suitable fine-foliaged plants. Amongst these mounds the well-selected Chrysanthemums will be disposed. Every plant in the group, large or small, shows its own individuality; every part of it can be seen. By the aid of Moss and other greenery, all pots are hidden from view. Crotons with one stem, some 3 feet or more high, are displayed to advantage, especially when they are of the drooping character so suitable for decoration as is this section. By this method of arrangement the public are enabled to turn from the ugly, stiff, formal method of showing the cut blooms on flat, sloping stands of one uniform height and width, and thoroughly appreciate the more rational method of seeing this fine autumn flower displayed at its best. At York this style of grouping Chrysanthemums is meeting with much favour from visitors. Contrast these groups with those exhibited down the centre of the building in circular form, where no other idea seems to prevail except that of crowding as many plants as possible into a given space. Perhaps the executive are here somewhat to blame for confining the classes to so limited a space, which practically gives the exhibitor no alternative but to pack the plants together as closely as possible to produce a bold effect.

At Hitchin one of the best groups of Chrysanthemums only was arranged that I have seen. The plants were quite dwarf, ranging from 18 inches to 4 feet. Each was beautifully clothed with foliage right down to the pot, and surmounted with blooms equal to any in the stands. Being thinly arranged, so that each flower could be distinctly seen, a grand effect was produced. Such an exhibit as this could not fail to be instructive. The Edinburgh show, although remarkably good in many respects, is lamentably weak in this department; not one single group arranged is worthy of an example for beginners to imitate. The plants are ill-adapted to the purpose in the first place, and secondly, the arrangement of them is very bad. At Norwich, too, I noted the same failing in an otherwise meritorious exhibition. At Leeds, where all other features are well displayed, the Chrysanthemum groups are simply sloping banks of plants with inferior blooms, except in two instances, where but a very few Chrysanthemums were employed. Some few years since the Chrysanthemum groups at Ascot were a credit to any society, now they are but third-rate examples. This depreciation is, I believe, mainly owing to a reduction of prize money. It is useless to expect merit where the return is inadequate to the labour expended. Many more instances of both good and bad grouping of Chrysanthemums might be given, but sufficient has been said to denote the decidedly improving tendency of displaying the Chrysanthemum in its best form. E. MOLYNEUX.

Chrysanthemums at Swanley.—I notice in the article bearing the above title on p. 414 a reference to a colonial variety called M. Van den Heede. This is a printer's error, but a very pardonable one. Van den Heede is a seedling raised by M. Ernest Calvat, but the one meant is Mr. Van der Heyde, a variety named after a gentleman at Strathfield, New South Wales.—C. H. P.

A green Chrysanthemum.—Several varieties of Chrysanthemums have been announced as having green flowers, but none of them have yet made their appearance on the show boards at our exhibitions. Unfortunately for the raisers, the colour is not an attractive one, although I believe such a curiosity would excite some degree of interest from the ordinary public. At the N.C.S. floral committee meeting of the 20th ult., M. Ernest Calvat staged a new seedling named M. E. Roger, which was a large-sized globular Japanese incurved variety of a peculiarly pale watery green shade. As shown, it might certainly find a place on the exhibition table, and the seeker after novelties should make a note of the variety, which will no doubt be distributed next spring.—C. H. P.

Chrysanthemum L. Canning.—Opinions may differ as to the excellence of this Chrysanthemum when compared with the now well-known Lady Lawrence, and probably some may prefer the latter. Those who require late blooms should, however, give L. Canning a trial, for it is undoubtedly an excellent kind for Christmas and the new year. With me it comes rather later than Lady Lawrence, the habit is more compact, and it is not so liable to mildew as most of the late blooming kinds.—J. C., *Byfleet.*

Chrysanthemum Mrs. James Carter.—We are now so inundated with so-called new varieties of Chrysanthemums that differ in the least possible degree, or perhaps not at all from others already in cultivation, that a good and distinct variety if it does not produce huge blooms is very apt to be overlooked, charming though it may be in some respects. Such an one is Mrs. James Carter, in which the florets are thread-like, and the bloom in shape a good deal after the manner of the yellow Sweet Sultan. It is in the catalogue of the National Chrysanthemum Society classed as a Japanese, but that is such an elastic term that it conveys little. The flowers are of a straw-yellow hue, becoming whiter with age. It is well adapted for growing as a bush, and is seen to the

best advantage when disbudding is very little, if at all practised, as then the clusters of light feathery flowers are infinitely more pleasing than many of the monstrosities that have only size to recommend them. Among varieties especially suitable for the greenhouse or conservatory this must certainly be included, although exhibitions innumerable may be visited without finding it represented. This latter remark will also apply to many other varieties particularly adapted for growing into bushes for the greenhouse and for cutting.—T.

THE PAST CHRYSANTHEMUM SHOWS.

Exhibitions of Chrysanthemums are all but over, and we may now look back and note a few things by way of observation. I think it can be said that Chrysanthemum shows were never so numerous as during the present year, and that the amount of enthusiasm was never more marked. This clearly indicates a liking for large blooms on the part of the public, whatever may be said about their ugliness and general unfitness for many purposes of decoration. There is also a greater number of amateur growers who appear to like the excitement of competition, and whose specimens bore evidence of careful culture. Many of the blooms, indeed, compare favourably with those produced by gardeners, who, of course, have better appliances.

The groups at the Aquarium were considered the best yet seen. This was due to fine-foliaged plants being intermixed with the Chrysanthemums and arranged with consummate skill. At many country gatherings I saw the same old style of grouping which exhibits anything but taste. The idea, apparently, is to tie each bloom to a stiff stick, and then to arrange the plants closely together with a surface as flat as a table. In finishing the front, too, there is an evident want of style when the pots and sticks are so naked to the eye. In pot specimens I have noted very little different from former years. The fine large trained specimens are more examples of unwearied patience than things of beauty. At one show there was a class for plants grown without disbudding, and only the necessary training to keep the branches upright. The first prize went to handsome bushes from which one might cut an armful of flowers without being missed. This appears to be a class that might well be extended in other directions. Such objects as the above Chrysanthemum bushes would be serviceable anywhere.

Undoubtedly the greatest interest is now centred in the cut blooms. Here the Japanese section is carrying all before it. In colours and varied forms there seems an endless variety, and better developed Chrysanthemum flowers than those exhibited during the past month of this popular class have not been seen in this country before. There is perhaps too great a desire to favour absolutely coarse varieties on the part of those who grow them, but the more refined sorts (not necessarily the smallest) are generally the more admired, the white Mdme. Carnot for instance. Is there any Chrysanthemum so beautiful? This variety has been splendidly shown. Mons. Pankoucke, Mrs. W. H. Lees, of extra size with grace of form; Phœbus, a splendid yellow; Col. W. B. Smith, grand in form and colour, and Mlle. Thérèse Rey have been very fine. Charles Davis and Viviand Morel are still two of the handsomest, and G. C. Schwabe is not yet surpassed in its shade of colour. Eva Knowles was most striking, the apricot hue being so distinct from anything else. A sort in fine condition was H. L. Sunderbruch, a lovely yellow. I have not seen the bright rose-coloured Mme. Marius Ricoud so charming before. The incurved sorts, Robert Owen and Lord Brooke, were also abundant and handsome. Another sort of this shape, the pure white Mme. Ad. Chatin, was of remarkable beauty. Very few flowers of the popular yellow Sunflower came under my notice in the condition of former seasons, but Thos. Wilkins, a yellow, was remarkably fine in many instances. R. Dean and M. Georges Biron are two dark-coloured flowers with excellent qualities, and Souvenir de Petite Amie had few equals among white sorts. The pearly pink Viscountess Hambledon was not generally well shown, nor did I find many good blooms of the grandest of all dark Chrysanthemums, Wm. Seward. The above-named compose, of course, but a very few from the scores of varieties among the Japanese types; they are, however, of the highest excellence. Novelties in this section have been produced in large numbers. A few which will certainly be heard of again are the grandly-formed Edith Tabor, a yellow of a most lovely shade; and the handsome and massive shaded white, Mrs. H. Weeks. Lago Maggiore possesses a richness of yellow not seen in any other kind, and a fine light yellow is Australian Gold. Dorothy Seward (a terra-cotta shade) and Mr. Herman Kloss (an orange-shaded bloom) are great gains.

The prim incurved Chrysanthemums have been seen better. Many fine new kinds are coming to the front. Chas. H. Curtis, Globe d'Or, J. Agate and others have been consistently well exhibited. Anemone-flowered Chrysanthemums are curious, but there is a want of colour among them, and the pompons would, to my thinking, look better if grown with less disbudding. The charming single Chrysanthemums also lose their beauty by the rigid manner in which they are staged. I would like to see disbudding prohibited in the case of these; were they exhibited in sprays loosely arranged, their great beauty and usefulness would readily arrest one's attention. The value of Chrysanthemums for decoration might be seen again if more encouragement was extended to branches of blossom as grown without undue manipulation. These might be arranged in vases, and would assuredly prove attractive at autumn shows.

H. S.

STOVE AND GREENHOUSE.

CYCLAMENS AND PRIMULAS.

Will any reader of The Garden tell me how to have Cyclamens and Primulas fit for show the first week in November.—Subscriber.

*** Old corms, or those that have flowered once previously, of Cyclamen persicum can be grown into an extra large size the following season, but, as a rule, they would not bloom early enough to win prizes in November, nor are the flowers so fine as those produced from young plants. Sow the seed at once, but not broadcast; the better plan being to dibble it out 2 inches or rather less apart each way just below the surface, in pans of fine, light, loamy soil. A temperature of from 50° to 56° is quite high enough till the seed has swollen considerably, when a brisker heat is desirable. Keep the seedlings in a light position, and when large enough lift them out with a label and place singly in 2½-inch pots. Keep growing in a gentle heat and moist atmosphere, placing them on dry, hot shelves, a common enough practice, checking growth and hardening the corms, with the consequence that little or no further good progress is made. The 5-inch pot is a good size to flower them in. Some growers give an intermediate shift; others do not. When given a shift into 3-inch or slightly larger pots, there is a chance of finally shifting a few of the very strongest into 6-inch pots. All ought to be in their flowering pots by the middle of July. A very rich soil is not desirable, but the aim should be to get the pots well filled with roots and then feed them. I use a mixture consisting of three parts of good fibrous loam to one of leaf soil, with a little charcoal, "burn-bake" and sharp sand added. During the summer the plants should be grown in pits or frames not far from the glass, and carefully shaded from bright sunshine. On bright days they ought to be occasionally lightly syringed or dewed overhead, and from first to last must never become very dry at the roots. This class of plants is liable to become infested with small green fly, which, unless kept under by means of either gentle fumigations with tobacco paper, or by dipping in tobacco water, soon ruins them. Flower them in a warm, somewhat dry house, not far from the glass, but avoid forcing or the leaves and flowers will become badly drawn. Pull no flowers from show plants after the first week in October, or the chances will be that not enough will be open when most wanted.

Old plants of Chinese Primulas cannot be recommended for exhibition. It is true they can be grown to a great size and produce abundance of trusses, but the flowers are under-sized and very frequently poor in colour. It should be "Subscriber's" aim to grow young plants to a great size, and have them in full bloom without subjecting them to a forcing temperature as this weakens them and spoils the colour of the flowers. Sow the seed in February or early in March, this being nearly or quite two months earlier than it is necessary to sow seed in order to have good plants for the greenhouse. Sow the seed on the surface of pots or pans filled with fine, light, sandy soil, and just press it in. Cover with a square of glass and Moss over. The seed will germinate most surely in a brisk moist heat. The soil must be kept uniformly moist without disturbing the seed, and before the seedlings become drawn gradually expose to the light. Keep them growing on a shelf in a temperature not often exceeding 60°, and when large enough pot off singly, using 2½-inch pots and sinking them well up to the collar of the plants, as it is scarcely possible to grow plants with a part of their stems out of the soil to a really serviceable size. Still keep the plants on a shelf in gentle heat, and when the soil is well filled with roots give a shift into 3-inch or slightly larger pots. After they have commenced rooting into the fresh soil transfer to a greenhouse shelf. In June or the early part of July their proper place will be on ashes in a shallow frame, and they should have a shift before they become root-bound. Some exhibitors are content to flower their plants in 6 inch pots, but occasionally they are gradually shifted into 7-inch and even 8-inch pots. The soil recommended for Cyclamens would suit Primulas, only if the loam is either heavy or devoid of root-fibres more leaf soil should be added. Make it fine for the young plants, but break up the loam into coarser pieces for the later shifts. Always allow each plant good room, abundance of sturdy leaves being a point in their favour, and ventilate freely, drawing the lights clean off on mild nights during fine weather. The central truss of flower is usually produced too early to be saved, but several extra strong later ones should be at their best in November. The plants ought to be flowered on a light greenhouse stage or, better still, on a swing shelf in a greenhouse, the colour of the flowers being further intensified by the occasional use of weak liquid manure, notably guano and that obtained from pigeons' or chickens' manure.—W. I.

Well-grown Eucharis.—This much valued flower is remarkably well grown at Hatchford. The plants are mostly in large pots, some of them exceeding 12 inches in diameter, and I counted as many as thirty flower-spikes in a single pot. The leaves are broad, of great substance, and of that rich lustrous green that renders the Eucharis, even when not in flower, distinctly ornamental.

It is not often that one sees such healthy specimens in pots of such large dimensions. Mr. Theobald is of opinion that many failures in the culture of this plant are caused by over-watering, and that erroneous ideas prevail in this matter. In the case of large specimens the soil should become nearly dry before being moistened, thus preserving the roots in a healthy condition and to a certain extent guaranteeing them from the attacks of the mite. Cow manure, well sweetened, forms an important ingredient of the compost.—J. C. B.

Acanthophœnix crinita.—This is the plant alluded to on page 410 under the generic name of Acanthopanax, which belongs to a totally different subject, viz., a near ally of the Aralias. The Acanthophœnix is far better known as Areca crinita. It is a native of Seychelles, from whence it was introduced in 1868. The description, as given in The Garden, exactly applies to this Palm, which, despite its high ornamental qualities, is never likely to become popular; as in the first place it is rather too lumpy—that is to say, the leaf-stalks are not sufficiently long to form a graceful specimen; next, the long, formidable spines detract considerably from its use for furnishing, and the foliage being thin in texture quickly suffers from exposure. Though the name of Acanthopanax does not occur in the "Dictionary of Gardening," the plant known as Acanthopanax quinquefolium variegatum has long been grown under that name in this country. In the just-mentioned publication it is referred to as Aralia pentaphylla variegata, the name of Panax spinosum being quoted as a synonym of the type; while in the recently-published "Hand List of Trees and Shrubs at Kew" the name of Aralia spinosa is given it, with A. pentaphylla as a synonym. This is certainly a fertile ground for confusion, as the old and well-known name, Aralia spinosa, is still retained; hence the difference in the specific names is only in the termination thereof.—H. P.

Dracæna lentiginosa.—It is as well to bear in mind that the plant which has been recently exhibited under the above name is a variety of the well-known Cordyline australis, which is still frequently referred to as a Dracæna. This particular form is also met with under the names of C. australis atro-rubra and C. australis purpurea, as well as that at the head of this note. The leaves are of a dull purplish brown hue, and not particularly effective, though they are certainly very distinct.—H. P.

Heliconia illustris rubricaulis.—This beautiful fine-foliaged plant alluded to on p. 416 must not be treated too liberally, otherwise it is apt to lose a good deal of its bright red marking upon which the principal beauty of the plant depends. When well coloured it is a grand object, but without the red veinings it differs little from the older, but rarely seen Heliconia metallica, and is by no means unlike one of the dark leaved Cannas. It requires stove temperature, and succeeds in a compost consisting of loam, peat, and sand, but if pushed on with occasional doses of liquid manure or some other stimulant, though the plant will readily respond to such treatment, the additional vigour is obtained at the expense of the brilliant colouring. This Heliconia can be propagated by division, the best time to carry this out being during the spring and early summer months, as in order to ensure the plants wintering well they need to be thoroughly established at that season. The older H. aureo-striata with the midrib and veins picked out with gold, though somewhat less vigorous, forms a good companion plant to the above.—T.

Manettia bicolor.—This Manettia was at one time more generally grown than it is now, though it is difficult to understand why such a charming plant has been allowed to almost drop out of cultivation. It is a native of the Organ Mountains in Brazil, and was introduced in 1843. A second species, M. cordifolia, is very pretty, but the contrast of red and yellow, which is to be found in the flowers of M. bicolor, is wanting in those of M. cordifolia, whose blossoms are of a uniform bright red colour. Both may be readily struck from cuttings, and they grow away freely, if afterwards treated as ordinary greenhouse plants.—T.

Orchard and Fruit Garden.

THE MORELLO CHERRY AS A BUSH TREE.

How seldom the Morello is met with in gardens growing in bush form. This is rather surprising when its easy culture is taken into consideration. Apart from this, if so grown it would allow of valuable wall space usually devoted to growing the Morello Cherry being utilised for other fruits such as Plums, both for kitchen and dessert use. The Jefferson, Coe's Golden Drop, Kirke's, Pond's Seedling, and several other varieties succeed well on a north wall, and when so grown prove extremely useful where quantities of fruit are required late in the season. The Morello when grown as a bush is best worked on the Mahaleb stock, as the latter promotes a dwarf habit of growth, and the trees may be planted 9 feet apart. If planted by the side of a walk they should stand back 3 feet from the edge of the walk. The latter is the best site for the bush Morello, as it allows of the trees being netted over to preserve the fruit when ripe from bird attacks, and the washing of the trees, mulching of border, and other minor details can also be the better attended to. As is well known, the Morello prefers a soil inclined to be heavy, and the trees make the most robust growth and bear the finest fruit when afforded soil of this description, so that if not naturally present the staple should have loam of a heavy description mixed with it if light and sandy. On the other hand, very heavy soil is better if lime rubble is worked in with it when trenching it preparatory to planting, but it should not be overdone. Unless the soil is of a poor description, manure should be avoided, and then it should be thoroughly decayed and used sparingly, otherwise gross growths and gumming would ensue. A barrow-load or so of prepared soil would in all cases be preferable to the use of manure. The proper way to make use of manure is as a surface mulching after the trees have become established and begin to bear heavily, and they will then do with an annual dressing. It is astonishing how the roots find it and ramify in all directions, rendering the raking off of the remains of the mulch in the winter rather difficult to do without tearing the roots.

In a dry season the trees appreciate attention in the way of watering, and if this can conveniently be done finer fruit will be the result. Diluted house or farmyard sewage, although not a necessity, may be given with advantage. Little or no pruning is required beyond thinning the young wood when it has become at all crowded and removing dead branches. Stopping of the young shoots should be assiduously attended to during the summer months to prevent them from becoming long, bare, and straggling, and this stopping tends in a great measure to prevent gumming and loss of branches which generally overtake trees that are allowed to grow without any restriction. Stopping or topping of the shoots is best done when the young growths have about six or seven fully developed leaves.

Other minor details in their culture and which are the same as for wall trees are keeping the trees free from insect attacks, especially black fly, and if the latter gains a footing washing with an approved insecticide. If time and labour will allow, an occasional wash with the hose where water is laid on or by means o the garden engine will help to keep them clean. As the washing of fruit trees during the winter months has now become recognised as an almost absolute necessity, the bush Morello should also receive attention in this direction, and even if nothing but soap-suds is used two or three times while the trees are in a dormant condition, there will be little to fear from an insect attack the following spring.

On bush trees the fruit will hang in perfection until the end of October or nearly as long as that grown on a wall, and in point of quality, size, colour of fruit, it is equal, while there is a considerable difference in favour of the bush tree in the cost of production. A. W.

Sparrows and Gooseberry buds.—In most gardens sparrows are more or less troublesome amongst Gooseberry bushes, various remedies being adopted to keep them at a distance. Some gardeners defer pruning till late in spring, thinking that thereby a greater percentage of buds will be spared, and that then the pruner can judge better how to use the knife. In very large gardens, however, containing many bushes this postponement cannot be indulged in, as work is usually very pressing in spring, to say nothing of the check given to the trees by wholesale shortening of the branches when in this advanced state. My experience is that if the trees are pruned even in November, sparrows and bullfinches may be kept away by sprinkling lime and soot over the bushes every three weeks during showery weather. Wood ashes are very effectual, as being bitter the birds do not like them.—J. C.

Pear Black Achan and others. — This Pear (Black Achan) is not so commonly met with in Scotland as it was many years ago. I notice it in some catalogues, however, and it is described as of excellent flavour. It is not a handsome Pear, but some of the best Pears, and other fruits, are poor in appearance. I only remember this Pear as a free bearer on a low stone wall while I was a youth under my father's tuition. I have never seen this old favourite so fine as on some old houses in Scotland, and where gravel walks were formed over the roots. The finest dish of Doyenné du Comice I ever saw was at Glasgow show (November 21). They came from Lord Hamilton's gardens, Dalzell, and were among some other fine examples in the first prize collection.—M. Temple, *Carron, N.B.*

Caterpillars on fruit trees.—After the note at page 419, perhaps you may like to see a band which has been in operation. The one sent has on it about 130 insects (mostly females) of the winter moth, and therefore representing a vast number of eggs, and later on of caterpillars. The moths have been in great force this season; many thousands have been caught. The band was cut in two in order to get it into the box. We use a band of the Willesden brown paper next the trees and the canvas over it. The canvas will serve for some years if cleaned from grease by heating it, and putting it by. Perhaps I should add that Oakwood garden appears to be especially attractive to the winter moth. Some years ago we banded the trees in our two gardens at Weybridge, when so few moths were caught that it was not necessary to continue the precaution.—George F. Wilson.

Pruning Peach trees.—I quite agree with J. C. Clarke as to the advisability of the early pruning of Peach trees. I never could see the wisdom of leaving this over till the early spring or just preceding the buds advancing into colour. Personally, I never have any set time for such work, it being a matter of when the time can be best spared after the leaves fall. Sometimes it is early and sometimes later. Trees that have been carefully disbudded, so that there is no overcrowding of shoots, and which also have had surplus shoots cut out after the trees are cleared of

fruit, cannot possibly receive any harm by early pruning. Under glass I prune as soon after the leaves have fallen as possible; the branches and shoots being cleaned at the same time. These are tied in as soon as time can be spared. The wood of open-air trees if it is ever killed or injured by frost must be in a very indifferent state of ripeness, and such trees could never be expected to produce satisfactory crops of fruit.—A. YOUNG.

Strawberries for forcing.—I cannot quite agree with Mr. G. Wythes regarding early forced Strawberries in your issue of December 7. I, like him, am no advocate for early forcing merely for the sake of having forced fruit. Mr. Wythes relies upon Vicomtesse Héricart de Thury for his earliest supply. I must differ from him, for where one has to keep up a daily supply for the dessert from the middle of February onwards he cannot do better, I think, than give La Grosse Sucrée a fair trial, it being, I find, the most prolific, well-formed, best flavoured, and solid fruit for packing. It will stand hard forcing, as I have 200 plants showing flower at the time of writing. I use Vicomtesse Héricart de Thury but little, and that for a second early as the flesh in travelling becomes somewhat insipid. To follow this one cannot have a better in this district than Captain (Laxton), the flavour being good, the fruit also travelling well. As a succession to this little grown variety I use Sir Joseph Paxton.—JOHN T. HAYES, *Castle Ashby, Northampton.*

Late Plums.—W. G. C. (page 390) advises the culture of Wyedale, and those who grow for sale will find his remarks valuable, as this variety follows Monarch, a much finer Plum I admit, but size is of less importance when fruit is wanted much later than Monarch will provide the supply. At page 429 Wyedale is highly recommended for cooking, and I quite agree with Mr. Neighbour's remarks. With me it has never failed to give a crop. My trees are all standards, with a short stem, and the fruit is of fair size. I was not aware Wyedale had been in cultivation so long. I have only grown it a few years, in fact was unaware of its existence till I saw young trees cropping freely in the Maidstone district. I may also add I saw some grand young trees in the autumn of 1889 in the South of Scotland, in poor land and the variety was thought much of on account of its free cropping qualities and for preserving. At page 419 J. C. notes the value of the old Winesour Plum for late use. This is certainly a valuable variety in districts where limestone abounds, but I have grown it on a thin sandy soil and rarely got a crop, but this was in the southern part of the country. In northern districts it was the reverse, and much liked for cooking, keeping good when gathered, well through October and November. Late Rivers is an excellent late Plum for dessert. I do not notice this variety is recommended. I find it invaluable for late use, and though not large the flavour is good for so late in the season, and it may be had in November. Coe's Late Red is valuable for October dishes, but with me not so good a cropper as the Golden Drop. The kinds named by Mr. Neighbour do not crop so well as I could wish, but, as stated, they are fine late varieties and in a good fruit soil are valuable when grown on walls, as they bear more freely and are easily protected.—W. S.

Cider making.—This industry appears to be growing, and this fact will, I think, prove in time a boon to those who grow Apples for market. In abundant seasons when, during October and November, Apples are a glut on the market, second quality samples do not pay to send to towns at a distance, even if conveyed by cart or van. But when sent by rail and handled by a salesman, the grower often finds himself out of pocket in the end. What then becomes of tons of small and inferior fruit in districts where no cider factory exists? They are thrown to the cattle or allowed to lie and rot. In Norfolk one large manufactory already exists, which it may be reasonably supposed will use up all samples that cannot find a ready sale in the ordinary market, and if the price given is small, it will help to pay for labour. I heard recently that the large Kentish growers thought of combining to establish a cider factory, and I should think the experiment would succeed, as in seasons of superabundance, not only the smallest, but large quantities of medium sized, average quality fruit would be available for cider making. Thus the quality would be superior, and the vast metropolis being so near at hand a ready sale for such a wholesome drink would be ensured. I am told that in the cider counties of Worcester and Herefordshire farm labourers prefer it to beer in hay time and harvest.—J. C.

THE WINTER MOTH.

ACCORDING to present indications, next spring will witness a very violent attack of the larvæ of the winter moth not only on fruit trees, but also on forest trees, hedgerows, &c. In pruning Apple, Pear, and Plum trees recently a far greater number of the practically wingless females has been discovered than is usual, and the eggs are much in evidence about the buds, in the forks of the shoots, and at the ends of those shoots that have been pruned. The latter is a very favourite place for egg-depositing, the female cleverly fixing the eggs between the bark and the wood in the slight cavity usually found after pruning. I have on many occasions counted over seventy eggs at the end of one of these cuts, and when this goes on all over a tree, almost every egg hatching out its caterpillar, it must be plain that the attack will be very serious indeed; and unless the tree is very vigorous and, thus to some extent able to withstand the pests and their ravages, the consequences are most likely to be extremely serious. Most of our entomological authorities state that each female will deposit 200 eggs each, but, so far as I can learn, they do not state if more than one batch of that number is laid. From some experiments made, I feel sure that several similar quantities are laid by each female during the season for laying, which continues from early in October to the end of February, and occasionally later. If one of these female moths is restricted by means of very fine netting to a limited area, with facilities for depositing her eggs, it will be found that fully 200 have been laid in five days, and, unless my experiments have been wrong in some way unknown to me, this female if allowed freedom, but prevented descending from the branch on which she has been a prisoner, will in about three weeks be ready to lay another batch of eggs. In face of this enormous deposit by the large number of moths, it may be asked, what are the best means to adopt to render the threatened attack as light as possible? The first and most important is to thoroughly cleanse the trees of all Lichen, mossy growths, and other filth, by means of some of the recipes advised in THE GARDEN from time to time. One of the best of these cleansers for all dwarf-growing or wall trees is, 1 lb. of crude potash and 1 lb. of caustic soda, dissolved in 10 gallons of hot water and applied warm to every portion of the trees in the form of a spray. This is a splendid winter wash for fruit trees, but it should be understood that it will not destroy the fertility of the eggs. No insecticide or tree wash will do that without first killing the trees; therefore the remedy would be worse than the disease. Its usefulness is, that by killing and fetching down Moss or filth from the branches, thousands of eggs are dislodged, and by falling down to the soil they fail to hatch out on such an unsuitable medium. With tall standards the spraying with the above mixture would be so difficult to apply over the higher branches, that it is impracticable, and other measures must be adopted. One of the best modes of dealing with these tall trees is to procure some fresh air-slaked lime and throw the same over the branches when the Lichen is a little damp. A handy-man with a ladder will soon do a lot of trees if he has another to wait upon him with lime as he requires it. By the above methods, thousands of eggs of this winter moth will be dislodged and destroyed, as on examination it will be seen that immense numbers of eggs have been laid in the mossy substances on the branches. When there is no further danger of more eggs being deposited, say in March, it will pay for the time and trouble to go over all the dwarf trees, and cut a small piece from the end of former cuts, taking care to put each piece in a basket or box as it is cut from the tree so that all may be burned, thereby effectually disposing of a great number. Anyone with good eyesight can easily detect the eggs in the positions mentioned. When first laid they are nearly white in colour, gradually changing to almost an orange hue, which colour they retain until they are hatched. W. G. C.

Keeping Apples in boxes and barrels.—There seems to be a general inclination amongst amateurs and gentlemen to have their Apples packed in boxes and barrels, with an idea that they will keep sound for a longer period, fresher and with less shrivelling than on the shelves of the fruit room. While admitting there is a certain amount of truth in the above, there is another point which people probably fail to recognise, viz., the depreciation in the flavour, especially in the finest-flavoured dessert varieties like Cox's Orange Pippin, Roundway Magnum Bonum, Ribston Pippin and others of that class. Cooking varieties are also affected, but it is no observed so much owing to the cooking. Those whose tastes are cultivated quickly detect the loss in quality, and those who contemplate storing in the above manner should bear this in mind.—W. G. C.

Starting early Vines.—While many ignore the old-fashioned plan of forming a ridge of sweet new Oak and Beech leaves on the floor or border of early vineries, I have still great faith in it; in fact, I think that where this can be done there is no need for syringing the rods at all, as the healthy vegetable ammonia given off by the leaves is just what is wanted to induce the eyes to break quickly and well. Not only is the insecticide mixture soon washed off by frequent syringings, but much harm results from soaking the rods in dull cold weather, especially when by afternoon syringings they remain wet all night. I am certain that mildew and a host of other evils are brought about by this process in early forced vineries, and for that reason I never wet the rods in the afternoon, except in fine bright weather.—J. C.

Gumming in fruit trees.—Although the causes of gumming in all kinds of fruit trees are manifold, yet one of the most fertile is that of allowing the ligatures to cut into the bark and even inner flesh of the tree. Many who plant fruit trees are not aware that much mischief may be wrought, even in a single year, by allowing insufficient room for bark expansion. I have sometimes seen the wire, by which the labels have been fastened to the trees, all but buried in the wood, defying all endeavours to withdraw it. The best way is to fasten the labels to the wall by means of nails, and not to suspend them from the trees, as is frequently done. All ligatures should be examined annually, and where the least pressure exists, replaced with new ones. In tying Peach trees it is far better to brace the shoots with twisted matting than to endeavour to straighten them by too tightly tied ligatures.—J. C.

WILTON HOUSE.

The visitor to Wilton who has no previous knowledge of the town's history, but knows it chiefly through its far-famed carpets, learns with some surprise that this quiet old town has an illustrious past. It was at one time the chief town of the Anglo-Saxon kingdom of Wessex, whilst later on it gave its name to the shire in which it stands—hence Wiltshire. Its period of greatest prosperity was from the ninth century onwards to the year 1244, in which year the Great Western road was diverted, and from thenceforward its prosperity waned. Here, too, was once an important monastery, given to Sir William Herbert, first Earl of Pembroke, by Henry the Eighth, and on, or near, the site of this monastery now stands Wilton, the Earl of Pembroke's charming seat. Although close to the town, so well timbered are the surroundings, that the mansion stands in perfect seclusion, looking out upon a scene in which the combined beauties of Grass, water, and trees abundantly compensate for the somewhat confined area within view. The mansion stands near two rivers. The larger one, named the Nadder, bounds the garden grounds in front, and a smaller stream, the Wily, separates the kitchen garden from other portions of the grounds, both ultimately mingling their waters and flowing on to join the Avon. The mansion is of stone, its earliest portion being from the designs of Hans Holbein, but the greater part of it was designed by Inigo Jones.



Wilton House, south front *Engraved for* The Garden *from a photograph by Mr. S. Griffin. Lucerne, Wilton Road, Salisbury.*

One of the great glories of Wilton is its fine Lebanon Cedars, the tree having been extensively planted here at the time of its first introduction, and although later years have witnessed a great thinning of its ranks, enough remain to form the most prominent feature of the place. The Wilton Cedars are older than those at Goodwood or Warwick, and although mighty ones have fallen, some still remain, whilst numerous young ones are growing up to take the place of those that fall victims to the storms. Whilst the present wise policy of frequent planting is continued, there will be no break in the history of this tree at Wilton. The finest old specimen has a grand bole about 15 feet up to the point of branching and of fairly even diameter throughout its length of main stem, which girths fully 24 feet. A stem of greater girth entirely enshrouded in Ivy stands near by, the tree having perished in a storm some years ago. A noble evergreen Oak near the Cedars next arrests attention. The stem girths 19 feet, and at one time it had a symmetrical rounded head of branches spreading quite 100 yards in circumference, but a giant Cedar in its fall broke away a large portion of this Oak on one side. It is a magnificent specimen in perfect health, and bids fair to grow out of its present disfigured state. Near this tree, and on the west side or library front of the house, is an Italian garden, and beyond it a long vista terminated by a stone structure called Holbein's Porch. A fine Chamærops Fortunei stands near, this also being a plant out of the first introduced batch. It has been outside for seventy years, is not so tall as some younger specimens we have seen, but its stem is unusually thick and denotes great age. A flight of steps from the Italian garden leads up to an orangery filled mainly with Camellias, large and small, in pots and planted out, all in perfect health.

The view here given is that of the south front of the house, showing a little garden of stone-edged beds set in gravel. Beyond, adorned only by the grand trees on it, the lawn spreads away to the river bank, the river itself being spanned by the "Palladian Bridge," built of stone and having a roof supported by rows of columns on either side. This leads to the deer park, in which the ground rises upwards to a considerable elevation, whilst along this slope another informal avenue of Lebanon Cedars is a fine feature amid the great beauty of native trees in abundance and of large size. An interesting fact gathered in regard to the Cedars is that on an average once in ten years they ripen a good batch of seed, and advantage is always taken of a favourable opportunity to save some and sow for future planting about the place. The past season had been a suitable one, and numbers of fine cones were seen well advanced towards maturity.

Looking eastwards from the house, the ground stretches away almost as flat as a table, but this flatness has been delightfully broken up by a series of admirably arranged groups, chiefly of coniferous or evergreen trees and shrubs margined in a pretty way with graceful masses of Savin. A broad gravel walk at right angles to the east front of the mansion, with lawn and fine trees on either side of it, extends for 300 yards, and is terminated by a seat hedged round with Yew, and near it a trio of fine trees command admiration in Lawson's and the Nootka Cypresses and Thuja gigantea. On the opposite side of the walk is a fine group of Pinus excelsa, the trees large and laden with fine cones at the time we saw them. This bold walk and the shrub groups that break up the flatness of and give distance to the fine expanse of lawn that extends to the water-side are from the designs of Sir Richard Westmacott, who assisted the Countess of Pembroke in greatly beautifying the grounds.

The second engraving shows well that portion of the house commanding the view of this broad walk, with its adjacent lawn and distant water, whilst between the trees in the distance is seen the tall spire of Salisbury Cathedral. Near the river a statue of Venus on the top of a column stands in the centre of a little square formed by trees of the Italian Cypress, which have to be renewed from time to time as they fail, but there is one tree—differing in no outward appearance from its fellows, and apparently growing under like conditions—that seems altogether hardier and more robust. It weathered the winter of 1860 when all the others were killed, and it is still quite healthy. The red Cedar was charming in some of the groups, its branches laden with glaucous fruits, that appeared as a silvery sheen cast over the tree. Yews, Hollies and Evergreen Oaks, numerous and fine, give perennial verdure to the grounds. Coniferous trees in sheltered breaks and nooks are equally luxuriant, a tree of Picea cephalonica especially so, being nearly 100 feet high; whilst many more of this tribe are growing with a vigour that betokens the congenial conditions of soil and situation. These trees have been planted by Mr. Challis, who has had charge of these gardens more than thirty years.

The fruit and vegetable departments alone merit a detailed notice, but our visit was at the end of the season, after the ingathering of the crops. At any time of the year, however, the visitor could not fail to notice the grand pyramidal Pear trees that margin the vegetable quarters, all of which have been planted and trained to their present perfection of form within the period of Mr. Challis's charge. The fruit walls are equally well clothed, Peaches and Figs having the protection of a broad coping overhead. Under glass there was the same evidence of good all-round culture, particularly visible in the Grapes that were still hanging, one house especially, filled with Venn's Black Muscat alone, of which the crop was almost intact, the bunches individually ranging up to 4 lbs. weight. The back walls of the vineries here are also covered with Vines, and Alicante gives some really serviceable bunches under conditions that many would hardly expect them. In the Peach houses, too, quite a different method of growing the trees has been adopted, and Mr. Challis claims to get three times the amount of space, with the crop, of course, in proportion. The front trellis of the lean-to Peach houses is not run longitudinally, but instead there are transverse trellises with trees on either side of them. This also allows of trees being fruited on the back walls of the house, and the best answer to any question that might be raised as to the value

of the practice is, that it has been followed a number of years, and no necessity has arisen to change or modify it. A range of what once was Pine pits is now filled with a varied collection of Orchids, Cattleya labiata being finely in bloom at the time of our visit. Chrysanthemums in great numbers filled another long house, every plant grown on more natural lines and allowed to give sprays of many blossoms. We also saw a delightful display of this flower outside the houses. The plants are grown in narrow borders along the fronts and ends of the houses, and trained loosely to the brickwork. They have night protection with canvas, which is removed by day, and many graceful Japanese kinds not tried, as a rule, outside were flowering admirably.

KITCHEN GARDEN.

THE BEST TOMATOES.

PROBABLY there is no kind of fruit or vegetable grown on which there is such a difference of opinion as to which is the most productive, best shaped, and of the highest value for market as in the case of Tomatoes. Take any dozen growers and ask which variety they consider the best, and at least ten of the replies will be different; some of them will state they have one of their own that has been hybridised and selected annually from the handsomest fruit and most prolific plants until, by the exercising of great care they have at last got a variety equal to any in commerce. This answer has frequently been given me during the last few years, and if I were questioned on which I thought was the best I had grown, my answer would be much the same. There is no doubt varieties of Tomatoes degenerate considerably unless precautions are taken in the selection of the fruits and plants for seed; therefore to avoid growing a poor and possibly unprofitable sort many growers cross or select their own seed from the best of the proved varieties they have. Amongst the host of so-called distinct Tomatoes there are not many sorts much better than Conference, as it combines robustness with a very prolific habit. Some object to it that the fruit is scarcely large enough, but the taste for big Tomatoes is passed by both for use in the kitchen or for market. A fruit that weighs a quarter of a pound is quite large enough, and is now much preferred by all Tomato eaters. Duke of York is another variety that will probably be much more extensively grown in the future, as its merits are becoming highly appreciated. If no thinning of the fruit is practised, the size is just what it ought to be for selling, averaging about three or four to the pound; the shape is perfect, also the colour, and the flavour all that can be desired, with the further advantage of the plants bearing freely for a long period. As an exhibition variety it is also valuable. By thinning out the fruit to two or three in each cluster and supplying the roots with plenty of suitable plant food, Tomatoes over 1 lb. each in weight will be produced, of model form and lovely colour, very difficult to excel by any other variety. Sutton's A 1 is a great favourite with some growers, as it bears a heavy crop of moderately sized fruit of good shape and deep colour fairly early in the season. I have grown this sort extensively both in pots and planted out in firm shallow borders, it succeeding well in both, but it appears to give the best results from pot plants, my average being 14 lbs. from each pot (10-inch). Of all the early varieties that I have tried none has been equal to Early Ruby for first supplies. The rapidity with which this comes into bearing, its great cropping powers at a time when Tomatoes are most valuable, and the good quality of the fruit make it a decided acquisition. Although Early Ruby is a comparatively new variety, selection is desirable, as unless this is done many of the fruit come of irregular form, and are not so much in demand by fruiterers and greengrocers as those of better shape. I believe the days are gone by for growing the corrugated varieties for market; they may be satisfactory for home use, but buyers of all grades now prefer Tomatoes of good shape, and the majority of growers recognising this fact only favour those varieties possessing that qualification. W. R. H.

Horse Radish.—Happening to refer to the fact that the Dutch supply our Christmas markets so largely with Horse Radish—which we should be able to grow ourselves equally as well—at the close of Mr. Mason's lecture on "Asparagus Culture" at the Drill Hall on November 20, I was much interested to learn from Mr. Mason, who is an experienced market man, that the public greatly preferred the Dutch roots of Horse Radish, because so much less hot or milder than ours. If that be the reason, one may naturally ask what secrets of culture have the Dutch to produce this mildness that are not open to English growers to utilise? Most probably their roots are grown in deeply-worked and highly-enriched soil and rapidly. No doubt they use water liberally, probably also sewage, so that the roots are forced into growth speedily, and being softer in texture, are also milder. Surely we have soils and situations which will afford similar conditions of culture.—A. D.

Large Vegetable Marrows.—I think the offering of prizes for huge old Vegetable Marrows at Chrysanthemum shows should be discouraged. There are other vegetables which may with advantage be encouraged—for instance, Celeriac, an improved type of Artichoke, little-known Scotch Kales, salads, Chicory, or other vegetables that are useful, though less showy. Recently at one of the shows in what one would consider an advanced suburban district I noticed prizes given for three Marrows, the heaviest being favoured, though quite useless as a vegetable. I admit they are used at times in a dried state, but few persons would advise their culture for this purpose, and the giving of prizes to such I think a mistake. Vegetable Marrows should be cooked in a very young state, before the seeds develop, and served whole. There is no culture in monstrosities of this kind.—G. W. S.

Large Carrots.—I quite agree in the main with the sensible remarks of "A. D." and "G. W." (pp. 376 and 377). One of the greatest merits of James's or the Intermediate Carrots in their best state is the small percentage of heart or core. The latter is mostly hard and strong, and unfortunately it imparts a good deal of its quality to all the flesh of the Carrot. To have this vegetable perfect, such handy sized Carrots as the Scarlet Champion should be washed clean and cooked whole. Some, however, do their best, perhaps, with their big Intermediate Carrots by halving or quartering them before cooking and cutting out all the core or heart for horses. The best edible flesh can then be cooked in less time and will be almost as mild and sweet as that of smaller Carrots cooked whole. There are two or three simple means of keeping down size and coarseness in Carrots; one is by choosing a good strain. Few now-a-days would think of sowing the Orange-yellow or Red Altringham for table use. Then the soil should be sandy, poor, deep, and no manure applied directly to the crop. Sow in lines from 9 inches to a foot or 15 inches at the most and thin to the same distance. Finally, do not sow main crops till the last of April or the middle of May. I have often noted the fact that "A. D." refers to—viz., the wonderful advance in flavour in stump or Horn Carrots in the early spring and late autumn or winter over the average crops in similar soils and sites. To preserve the flavour of good Carrots throughout the winter I have never found any mode of storing equal the close wringing rather than cutting off the tops and storing them in small heaps or ridges in the ground without any covering of tops, litter, or straw between the roots and the earth. But when all is said and done, few vegetables need more skilful cooking than the Carrot. The finest Carrots I have eaten for many a day were in London the other day. They had hardly any perceptible yellowish core, and the flesh was red, mild, sweet and tender throughout—a good strain of Intermediate perfectly cooked.—D. T. F.

Endive as a vegetable.—Though rarely grown for this purpose, it is excellent in every way and an agreeable addition to the list of autumn vegetables. In my estimation it is far ahead of Spinach, and if well cooked few would refuse to partake of it. Of course, if grown for cooking, size is required, and this season the Endives of most kinds are very fine indeed, especially the Round-leaved Batavian, one plant of this grand Endive being equal to two or three of the ordinary kinds. The above-named variety is one of the best for cooking, and for that purpose needs no blanching. When well grown, with a full, compact heart, it is blanched to a certain extent, and this portion when cooked is delicious. Many persons object to Endive as a salad, but when cooked it loses much of its bitter taste. The soil being so warm late this season, the Endives made a splendid growth when the rain came.—G. WYTHES.

Potato Renown.—In answer to the inquiry of "A. D." (page 376), the Potato named Renown referred to by me in a recent issue was sent out by Messrs. Webb, of Stourbridge. I was not aware of the existence of another round Potato under that name until "A. D.'s" note appeared. I quite agree with "A. D." that as a rule the round varieties retain their true shape and character far better than the kidney and even the pebble-shaped sorts. I grow several of the pebble shaped Potatoes, but have a great difficulty in preserving a true shaped stock of them. On light warm soils they seem to run out to a greater length. Two years ago I saw a dish of that grand Potato Sutton's Seedling, which is catalogued as a round, disqualified, the judges maintaining that it was a kidney, and no doubt the exhibitor had selected the roundest tubers he could find. This section seems to retain the original shape better when grown on a somewhat strong cool soil. I have never known a pebble-shaped Potato keep its true form so well as the old Porter's Excelsior, but unfortunately it is rather prone to disease.—J. C.

BRUSSELS SPROUTS.

THIS appears to be one of those vegetables which may be classed as unreliable, and I have some grounds for stating that there is not another vegetable which has bothered gardeners to such an extent. Of late years this has been especially so, as taking one season with another complaints generally appear in the gardening press as to its unsatisfactory state in one form or another. Either the varieties have been at fault or the season or soil has not been right. A few years ago there was evidently some truth in the assertion that the true old form of Brussels Sprout was being lost to cultivation, seedsmen, or those responsible for the keeping up of stocks, favouring the production of a large class of Sprout, handsome to look at, no doubt, but with about the rankest flavour it was possible to get in a green vegetable. When such as these were sent to the table there were found to be complaints, and no wonder, for instead of having that delicate marrow flavour, which a good Brussels Sprout should have, they were quite uneatable. Happily this is now changed as far as variety is concerned, as there are now really some capital strains. I can quite bear out what Mr. Wythes says (p. 415) as to Veitch's Paragon. It is, undoubt-

edly a capital kind, the flavour being really first-class, and if it is kept to its present characters, none need wish for a better. My plants of Paris Market are very good, the growth being very regular. At one time the plants appeared too small to suit me, but they came up surprisingly. I quite agree with Mr. Wythes as to the class of soils. There is quite as much mistake in having the soil too poor as there is in planting in too rich and loose soils. Grown on poor soils the growth is too slow to develop good flavoured Sprouts; these latter may be hard certainly, but too hard and yellow hearted to secure high quality. My impression is that it is not so much over-richness of soil that prevents the plants from forming well-shaped Sprouts, as lack of exposure. Three feet between the plants is none too much, and for such a dwarf variety as Paris Market, 2 feet in the rows and 3 feet between is enough. The plants as a rule are far too crowded. Planted closely, the plants run up certainly, but owing to the want of direct side-light, the foliage turns yellow, whilst with free exposure this remains intact almost to the last, and so assists in developing and also protecting the Sprouts. A. Young.

Quality of cooked Potatoes.—I can confirm "A. D.'s" note on this subject (p. 377). I have never found this most disagreeable feature half so pronounced as this season. Perhaps the most provoking variety is the Magnum Bonum. One end we may find a knob rather than a ball of flour, while the opposite extremity is a globe of water with blends of both in every conceivable mixture of insipidity or nauseousness between the two ends of the same Potato. No doubt the August rains after the long spell of summer drought were the active cause of spoiling so many kidney Potatoes this year. The rain stimulated the most excitable part into second growth, leaving the ripest end in a semi-dormant condition and flooding the centre of the tuber with an excess of watery sap. But all kidney Potatoes have by no means suffered deterioration to the same extent, Clarke's Main-crop, for example, suffering less from the disturbing August rains than Magnum Bonum or Champion. So far, however, I agree with "A. D." that round Potatoes have suffered least, perhaps the White Puritan least of all. But this has not always been so. Had the rain lasted long enough to environ and drown the rounds, and had they been no riper than the kidneys, possibly the whole tuber would have been waterlogged and spoilt. But we are thankful that the very early and very late Potatoes have proved of normal quality, and that even among midseason crops some have been able to resist better than others the disorganising force and the erratic distribution of the season's rainfall.—D. T. F.



Wilton House, east front. Engraved for The Garden *from a photograph by Mr. S. Griffin, Lucerne, Wilton Road, Salisbury.*

FORCING POTATOES.

In gardens of any size forced vegetables are in demand, and those who can supply good quality are to be congratulated, as the forcing when well done entails much trouble and a certain amount of preparation. I am aware many persons object to forced vegetables, but much depends upon the forcing and the way the roots or other green crops are finished. With time allowed for the crop to mature there would be less need to complain of the quality of forced fruits or vegetables. There are few complaints as to the quality of hard-forced fruit if it is perfect when matured. Many complain that forced fruits and vegetables lack flavour, but much depends upon the forcing, and in the case of Potatoes—those given ample time from start to finish—the quality is equal to that of roots from the open; in fact, superior, as those who force may limit the supplies of moisture at the finish to ripen the tubers, and thus obtain a drier Potato with good flavour. For years I have studied flavour in vegetables, and with great fluctuations of heat or moisture flavour is impossible. To force well, ample time must be given from the start, and for the best results in a given time it is well to grow kinds noted for earliness, and in this case flavour is a secondary consideration.

Potatoes are forced in various ways; the plan most favoured is in frames, but excellent produce can be obtained in other ways. Pots are often used to advantage, and I will briefly note the above methods and one I largely adopted with much success and at little cost when glass was out of reach. I will take

Frame Culture

first, and the necessity of preparing the seed at this season if early produce is required. The sets are much better if prepared, and for produce at Easter no time should be lost early in December in getting well-ripened seed, not small. I prefer tubers above medium size, placing the sets thin end downwards in shallow boxes with half an inch of old leaf or other rich soil under the tuber, standing the boxes in frames close to the light, in a temperature of 60°, and planting the first week in the new year. In this way very strong sprouts will be formed and there will be no blank spaces in the frames, each set will start evenly, and much time is gained by early sprouting. In frames it is not advisable to crowd, much of the vigour is destroyed; neither is it wise to use strong heat at any time, as slow forcing means few small tubers, the reverse when the temperature is not regular. The temperature should never be higher than 60° to 65° by fire-heat, with plenty of air, but not cold draughts in mild weather. The aim of the forcer should be to get dwarf haulm, and strong erect tops till the growth is nearly complete. In forcing one is obliged to use lighter soil than is often recommended for culture in the open, and this light material soon dries the tubers. Whilst swelling, the tubers should never lack moisture, the want of the latter arrests growth, and once a check is given it is not recovered. As regards bottom-heat, much depends upon the means at the cultivator's command; if by fire-heat, it is easily kept at the right temperature—70° to 80°—at the start, and I do not advise exceeding that during growth; if obtained from manure, I advise a liberal quantity of fresh leaves to be mixed; this retains warmth much longer and is not so violent as pure manure, which does not retain the warmth any length of time. In planting, the soil should be made firm, and at least 9 inches to 12 inches of soil given, adding more if the variety is a strong grower when the haulm is 6 inches high. I prefer to make the beds now and give the quantity of soil allowed a few days later, as the weight of soil causes the bed to sink, get more solid, and the bed is warmed and in nice condition to receive the sets at the date named. In soiling it is advisable to use new soil or that not much impoverished. I use old Melon and Cucumber beds, as these plants do not rob the soil much. Wet soil should be avoided, as the steam from the new bed will make it moist enough at the start.

Pot Culture

is simple; a few words will describe it. The same remarks apply with regard to preparation of seed, early planting to get good returns, and slow forcing. The advantage of pot culture is that time is saved, and earlier supplies can be secured than from frames, so that if a few dishes are wanted for a certain date pot culture will produce them in a shorter time than frames. If the sets are prepared as advised the sprouts may be 2 inches or more long early in the year. The sets should be planted in good-sized pots, three parts filled with the soil advised; failing this, use good loam, with a fourth part of old Mushroom or spent manure. The pots may vary in size, according to convenience to force. If on shelves, 8 inches to 10 inches is a useful size, with a couple of sets in a pot, but if larger, from 12 inches to 16 inches, three or five may be planted. The larger pots can often be placed in early Peach houses started in November, and near the pipes at first. Very little drainage is required with light soil, and the plants should get more soil when a few inches above the rim of the pots. If the sets are sprouted previous to planting, the weakest should be rubbed off, only leaving the strongest, and at the start very little moisture will be required, giving liquid manure when the pots are full of roots. Such kinds as Sharpe's Victor, Sutton's A1, and a good variety of Early Ashleaf (I prefer the two first for early forcing) are best for pot or frame culture, and the kinds named may be had good for Easter, that is,

allowing three months from time of planting after being prepared.

I have not named ordinary culture in frames or houses without bottom heat, as it is so simple and but few can devote special pits or houses to early Potatoes. I will now note a less costly means of production, but none the less valuable on that account. Though the produce is later, it is obtained at a season forced Potatoes are much valued, and is specially suitable in country districts where glass is scarce. My plan for a good supply of tubers at the end of April or early in May is to collect all the fresh leaves available, place in bulk, turn over a few times, and in January make a large bed 4 feet thick after well ramming or treading, using enough stable litter all round the sides to make the bed neat and prevent leaves blowing about. The size of bed should be according to space and material at command; if large, four rows of sets are planted and a row missed, this allows of covering. The bed is ready to plant early in February if soiled when made, and the seed may be slightly started in frames. I cover after planting with thatched hurdles made to cover four to six rows, according to size. These are supported by 10-inch inverted flower pots, and are readily removed in bright weather. Litter or dry Bracken may be used if hurdles are not available, but covering is a more tedious process. It is surprising what a long time leaves will retain warmth, and the tubers swell and are of excellent quality by the time named. For this work I prefer the Ashleaf; it is always good, and the flavour excellent. After the Potatoes are cleared the beds are used for Vegetable Marrows, or any other purpose, and the old decayed heating material is of great assistance in the autumn for potting and other purposes. G. Wythes.

EARLY PEAS.

Those who saw the splendid exhibit of these at the last Temple Show, from Messrs. Sutton and Sons, will have some idea of what can be grown by skilful cultivation, provided there are suitable structures at command to grow them in. As the time has now arrived for sowing, it may be well to remind those who have the command of cool Peach houses, late vineries and such-like places, that these can be utilised for this purpose. I am well aware that these structures are often required for many other things, but where room in them can be afforded, a crop of such early Peas as those exhibited on the above-mentioned occasion will well repay for any trouble that may be expended on them. It is easy enough to grow the hard-seeded round varieties, to have them ready for use at the end of May; it is, however, no light task to have the leading Marrow kinds ready by that date, especially in such a season as that experienced last spring, when on several occasions in February the thermometer fell below zero, thus in many instances necessitating fire-heat to keep out the frost. Peas, as most gardeners know, will not stand much forcing; they must, moreover, have a constant and regular supply of fresh air, without the plants being in the least subjected to cold draughts. This is not always easy to accomplish in late fruit houses, as the temperature of these is required to be kept as low as possible; but where there is a succession of such houses, that difficulty might be overcome. It will, however, not do to remove Peas from houses in which a little warmth has been kept to those thrown open to all weathers, as this would soon bring on mildew and ruin. Seed sown now in a cool Peach house, say in 5-inch pots, in a tolerably rich soil, should produce sturdy plants for planting out at the end of March, early in April, or for growing on under glass. One thing to be guarded against is sowing too thickly; better have half a dozen sturdy plants in a pot than a score of sickly ones, and for this reason none but the best seed ought to be sown. It is far better to pick out all the small undeveloped Peas before sowing, and to put fewer in a pot than to sow a lot of poor ill-ripened ones, that only produce sickly plants which choke the others. If soil be used that has lain for some time in the potting shed, this will still contain a considerable amount of warmth, as its temperature will not have been reduced by the late heavy rains, which in this district have been rather excessive of late, there having fallen during the last month about 6 inches. It will not be necessary to put any crocks in the pots for drainage, as the supply of water can easily be regulated. If the pots are three parts filled with soil that has previously been passed through a half-inch sieve, the seed can then be placed on the surface. From ten to a dozen will be ample for each pot, a row being placed near the outside at a regular distance from each other, the others towards the centre. The pots can then be filled with soil, giving a gentle watering through a fine rose, with water 10° or 15° warmer than the atmosphere, so as not to lower the heat of the mould used. After this all that is necessary is to stand them as closely together as possible in a cool house till the seed has germinated, which it soon will do if the weather is mild. When the young plants appear through the soil, air must be admitted on all favourable occasions to keep the plants as sturdy as possible, but in no case should they be subjected to cold draughts. The pots should be stood at a sufficient distance from the glass to prevent the soil being frozen, should there be a sudden change in the weather. Last February, though the frost was so severe, about a thousand pots stood in a cold Peach house here without the least fire-heat, the only protection afforded being mats thrown over them on sharp nights, and, with the exception of two or three days during the early part of the month, there was sufficient warmth in the house to cause a steady growth.

Varieties of Early Marrow Peas are now getting numerous. The following is a list of those I grew last season, and with the exception of the three first, which were planted out at the end of March and grew to the height of about 6 feet, are all dwarf. The sorts were Gradus, Exonian, Duke of York, Chelsea Gem, Sutton's Seedling, Sutton's Favourite, Daisy, Sutton's Early Marrow, English Wonder and May Queen. Such a list, however, is too long, and those who are compelled to grow them on narrow borders would do well to confine themselves to such as Chelsea Gem, Sutton's Seedling or other reliable dwarf kinds, as they occupy less room and may be planted at the foot of a south wall in frames or other temporary contrivances. In all cases I prefer putting sticks to them, as the pods, being more exposed to the light, fill better. Many who are not so fortunate as to have cool houses to protect early vegetables will no doubt be desirous of growing early Peas, and such may do so with temporary frames made with floor boards and large squares of glass, both are now so cheap that for a very trifling cost long rows of seeds may be covered, but I would warn those about to sow Peas in the open not to sow the Marrow kinds thus early unless some such contrivance is used, as they will run the risk of losing them should the winter be severe. I have sown the early Marrow kinds on a warm border as early as December 8 with good results, but the seed has been protected in severe weather, and this often entails a large amount of labour not at all times readily at command. While writing about Peas, I may here mention that as Sweet Peas are often grown in the kitchen garden to supply cut flowers, these may be treated in like manner as recommended for the cooking varieties, being quite as hardy as most of the others. H. C. P.

Tomatoes for early spring.—I do not think there is any season of the year in which early Tomatoes are more appreciated either as a vegetable or for salad than during March and April. To the March supplies my note is not applicable, as the winter plants will be in bearing. For winter supplies I have found it best to get strong plants from seed sown in August. I gave up the winter plants from cuttings some three years ago when we had such dense fogs, every plant having been killed, whereas the smaller plants from seed escaped. Many have not convenience to grow winter Tomatoes, but there is a great gain in growing a few plants for early spring fruiting. To do this, seed should be sown in October and the plants grown near the light on shelves in a temperature of 60°. If wintered in 4½-inch pots, the plants will be fit to pot up into 8-inch or 10-inch pots early in the year. Treated thus they will show blooms in January, and will give nice crops in April at a season Tomatoes are valuable. The chief points in culture with the winter plants are plenty of light, just enough moisture to keep them going, and no manure of any kind till the plants are in their fruiting pots. Many give too much warmth and a thin, weak growth results. At the same time a coarse growth is not required and should not be encouraged. It is not advisable to let the plants get pot-bound. Even in the winter season a small shift may always be given if the plants are kept close to the glass and carefully watered. At the final potting bone-meal is excellent as it does not build up a strong growth, but a short-jointed, fruitful one. Firm potting is also necessary.—G. Wythes.

POTATO DETERIORATION.

I have never held to the theory that Potatoes have deteriorated or have in any way become more subject to the attacks of the disease through such assumed deterioration. It seems odd that any authority on Potatoes should put forward such a suggestion in face of the fact that, more than in any other way our Potato crops have been saved from almost decimation through the agency of such robust varieties as are those which are classed as disease resisters. Again, it is perhaps not generally known that even natural species which have never been subject to intercrossing, and are to-day in exactly the same unimproved condition as they were in Raleigh's time, are just as liable to be affected by disease when grown outdoors, as are the ordinary varieties in use. So far from Potatoes having deteriorated, they are as strong in growth, many, indeed, far stronger than they were fifty years ago, when the disease first made its appearance. When Potato plants produce pollen abundantly, and just a few do so still, as is evidenced by the fact that they set their blooms freely and produce seed Apples largely, they are never great croppers. On the other hand, those which produce no pollen are generally good croppers, the bulk being very heavy ones.

During the past summer I grew seventy varieties of Potatoes in diverse parts of Surrey, and seed-apples were rare indeed, although the hot, dry summer was just the sort of weather to promote fertilisation. The chief varieties of potatoes I have met with during the past twenty years as pollen producers so freely as to set their own flowers in considerable abundance, were one American variety named American Purple, the pink-eyed Radstock Beauty, the red Reading Russet, and the white Woodstock Kidney. The last was, because a handsome variety, of excellent quality and free with pollen, very largely used as a pollen parent, and has been the progenitor of thousands of seedlings. It must be noted, however, that perhaps not one seedling in a thousand would repeat that free pollen-bearing characteristic, and all these varieties have all along been just as susceptible to disease as any others. Whatever deterioration has come to Potatoes, is not from intercrossing but rather from bad storing of seed. I have proved that to be the case in myriads of

instances where weak growth and indifferent cropping are due invariably to the wet upon planting tubers, thus causing heating, premature sprouting and waste. Seed tubers kept fully exposed to light and air, never heated or prematurely sprouted, and planted in full possession of their habitual vigour, always manifest ordinary robustness and give heavy crops. Then it is assumed that varieties wear out in time. That is all pure assumption. The Ashleaf Kidney, never a strong grower, is as good to-day as it was 50 years ago. It is all a case of yearly selection and good storing. Because this variety is an early one and rarely saved in bulk, the tubers for seed get better treatment. They are usually set out thinly in cool sheds on shelves or in boxes, and are never sprouted to their injury. Hence it is that this old variety contradicts in itself that incorrect assumption that naturally varieties of Potatoes will die out. Where carefully grown and preserved even the ancient Fortyfold is as good to-day as ever it was. Then again there is the assumption that Potatoes deteriorate if the same variety or rather same stock be grown on the same ground for many seasons in succession. That, too, is a fallacy when seed tubers are properly cared for. On stiff clay soil in Middlesex I grew stocks for many years in succession without finding the least deterioration. It may be true that a change of soil does influence the growth and cropping of varieties the first year, but I never found that effect to extend to a couple of years. Again, that effect is not always found, but it is occasionally so, and some observers have in consequence jumped too hastily to conclusions. From a trade point of view it is a capital theory to propagate, and I do not blame traders for working upon it. I am, however, discussing this question from a purely physical aspect, and in that sense adhere fully to what is written. So long as we treat the Potato tuber naturally, there is little danger that it will become weaker in constitution.

No doubt the best store for seed tubers in the winter would be in the soil, could we safely leave them there. That, however, will not do, and if we may not so store them, then the next best best thing is to give them artificially the nearest of natural conditions. Place them in thin layers so that no warmth is generated, with plenty of light and air to harden the skins, and when eyes push, as of necessity they will push in time, under any condition of storing, the abundance of light and air will keep the young shoots stout and healthy, so that when the tubers are planted, these shoots are of that stout robust nature they would have been had the tubers been left in the ground all the winter, and had escaped frosts and other enemies. A. D.

Preparing soil for winter cropping.—It is always a great advantage to the gardener if he can have his kitchen garden soil prepared for spring cropping by deep digging or trenching in the winter. Yet it is a fact that this sort of work often needs for its performance or otherwise the guidance of the future, and that future cannot be seen into. There can be no worse results to stiff pasty soils, just those of all others that need aërating and pulverising through the agency of frost and wind, than when we get a succession of wet weather following upon the roughing up of the ground. Then does it become saturated, the pores of the soil are closed as with paste, water is retained, and when dried it resembles baked clay. That is a most unhappy state of things. Could the nature of the weather during the winter be foreseen, then the working of or letting it alone could be determined. In the case of light, porous or sandy soils, such as under all ordinary conditions admit air freely, little of roughing up is needed, although they always are the better for deep working. But trenching cannot be left till the spring, and therefore must be done in the winter, so that everything as to the nature of weather following has to be chanced. There can be no question, however, let the nature of the soil be what it may, that aëration goes on even more thoroughly in the winter when carrying a green crop of some description which may in the spring be dug in and thus form excellent manure. There is no better crop for this purpose than Tares. In many cases it would be far better to have otherwise bare pieces of soil sown with Tares thickly, and perhaps a little Rye also, at the end of September. Growth soon ensues and there is in March quite a dense coating of green matter to dig in, whilst the soil is more open and porous than if left uncropped.—A. D.

Early decay of Celery.—There are complaints in this neighbourhood, and which is also my experience this season, of the decay of much of the earliest Celery. I attribute it to the extreme heat experienced, and which was followed by heavy rains, the result being that the soil in the ridges became almost like a mild hotbed, causing rapid blanching, followed quickly by fermentation and consequently decay. I do not know what else it could be, as later-earthed plants are all right. Such results teach a lesson as to not being in too great a hurry to commence earthing. A portion of the earliest must be done to secure an early supply, but a part should be earthed up later.—A. Young.

Trees and Shrubs.

THE RED DOGWOODS.

Few plants introduced into England are more effective than the common Dogwood, of which the usual name is Cornus alba. It is a shrub which, like many others, has allied kinds that are somewhat like it, and there is some confusion in consequence. The differences that may occur among such things may be made clearer by the following notes on these species by Mr. George Nicholson, of Kew.

Dogwoods with Red Bark.

Cornus Baileyi.—Along Great Lakes to Canada. Habit erect, not stoloniferous. Height 6 feet to 8 feet. Bark reddish brown. Fruit pearly white. Figured in *Garden and Forest*, 1890, p. 465, f. 58.

C. stolonifera.—Red osier Dogwood. N. America. Height 3 feet to 9 feet. Bark bright red-purple. Fruit white or lead colour. Sends up many suckers, and makes a good cover plant for game, liking damp spots.

C. amomum (or C. sericea).—Kinnikinnik. N. America. Branches purplish. Fruit pale blue. Height 3 feet to 9 feet.

C. alba.—North Asia. Fruit white, shoots intense red. This is the species most commonly cultivated. The variety sibirica has even more brightly coloured bark, but it is not so free a grower as the type. Leaves go off in some seasons into good yellows and reds, but the winter effect is most gorgeous.

C. sanguinea.—Our native Dogwood, not to be despised as an ornamental shrub, the decaying leaves deep red; fruit black, branchlets red, but not clean and bright like those of Nos. 1, 2, and 4.

Having cleared the ground as regards the kinds, it may be well to say, in regard to general effect, that all that is desired in this way may be obtained from one or two kinds. But as important differences as regards effect very often arise in varieties of the same plant (as in the case of the beautiful red and yellow-twigged varieties of the common Willow), so closely allied species of Dogwood give us different effects. As regards the soil for these plants, they are happy almost in any, and never more effective than when massed about lakes and ponds in wet soil, although in our country they will grow in almost any. As covert, it is often important to have things here and there that do not grow beyond a certain height, say that of a man, and these Dogwoods are among the best things we can count upon for this purpose. We find the variety sibirica brilliantly effective, and one of the best things we have ever planted was a large group of these, associated with the red-twigged Willow (the tall cardinal Willow). Both are beautiful in autumn leaf, and even prettier in winter, owing to the fine colour of the red Willow when bare harmonising so well with the twigs of the Dogwood.—*Field.*

Bambusa Veitchi.—At a little distance this will just now at once attract attention, for the leaves appear to be regularly and freely margined with white; but closer inspection reveals the fact that the variegated appearance is caused by the edges of the leaves being quite withered. The leaves of this are each over 2 inches in width, and about 6 inches or 7 inches long. It is a free-growing plant and soon forms a dense mass or clump. This Bamboo reaches a height of about 2 feet, so it must be considered as one of the dwarfs of the genus. A near relative is the larger and bolder-growing B. palmata, which is such a handsome, fine-foliaged plant that a place should be found for it in most gardens if possible; this reaches a height of 5 feet to 6 feet. Neither of the two kinds here mentioned should be associated with delicate subjects, as the rhizomes are very aggressive and would soon injure any less vigorous plants.—T.

Autumn tints.—The short duration of these on the Oaks, clothing miles of steep hillsides visible from here, was remarkable this season, for owing, I suppose, to some climatic influence, the trees retained their foliage and presented nearly as green an appearance as at midsummer—with nothing but an occasional fiery Beech and golden Birch to relieve the monotony—up to November 1. In three days, however, the whole was changed and the whole district one mass of colour. Never before have I seen such a mass of colouring on the Oaks. We were deprived of the glorious picture as suddenly as it appeared, for in the following week extremely heavy storms of wind and rain quickly spoilt the whole, and now we have yet another change of scene, prominent being the high, snow-capped surrounding mountains, with, far and near, snug greystone built, slate-roofed villages, farmsteads and solitary cottages blending harmoniously with their surroundings—not your garish-red brick and tile erections. The swollen mountain torrents tumbling madly down to the placid and tortuous river in the valley below; the grey, bold rocks, the various coloured boles of forest trees, the glaucous and glistening evergreens, and the infinite network of Fern and lichen-covered branches down to the bright shoots of Dogwood, golden wands of Willow and the Pernettyas in berry at the water's edge, all combine to produce a unique wintry beauty.—Jno. Roberts, *The Gardens, Tan-y-bwlch.*

Philadelphus Lemoinei.—The planting season must be my excuse for a few words in favour of this very desirable member of the Mock Orange family, and which this year has been much admired. At Kew during the summer it attracted a large share of attention, and in the last vol. of The Garden Mr. Goldring speaks of it as "the most glorious new small shrub I have seen for years." This Philadelphus is one of the many valuable plants that we owe to M. Lemoine, of Nancy, who obtained it by the intercrossing of the little new Mexican P. microphyllus with the European Mock Orange (P. coronarius). When P. microphyllus was first introduced (in 1883) doubts were expressed as to its hardiness, but it proved to be all that could be desired in this respect. M. Lemoine was not long in utilising the new-comer, for he distributed the hybrid form Lemoinei in the autumn of 1887, since which time he has sent out other varieties, but none of

them surpass Lemoinei. This last is in general appearance about midway between its parents, forming as it does a free-growing, twiggy bush, whose shoots, and especially the vigorous ones, all have an upright tendency. These shoots are about the middle of June completely wreathed with white flowers, which are borne in such quantity as to form quite a white mass. Other very desirable features are that it lasts a long time in bloom, and it has proved perfectly hardy even during the rigours of last winter. When P. microphyllus first flowered after its introduction one feature that caused it to be particularly noticed was the fragrance of its blossoms, which greatly resembled that of Pine apples. This fragrance was transmitted to the progeny, and so pronounced is it, that a bed or clump of the variety Lemoinei can be detected for a considerable distance. This Philadelphus can be planted in various ways, and one of the most effective pictures I have seen was a large circular bed, the central portion of which was planted with a number of P. Lemonei and edged with the smaller P. microphyllus. As this latter is a little later in flowering than the other, the beauty is retained somewhat longer than would be the case if P. Lemoinei alone was used. Another of M. Lemoine's hybrid varieties of Philadelphus received a first-class certificate from the Royal Horticultural Society last June. This was Boule d'Argent, said to have been raised from P. Lemoinei crossed with the double form of P. coronarius. In Boule d'Argent the flowers are semi-double, while the plant appears to be in habit a good deal after P. Lemoinei.—T.

PLANTING SHRUBS.

It sometimes happens when entering on a new place that a gardener finds a number of choice evergreen shrubs (known commonly as American plants) scattered here and there about flower garden and shrubbery that have been planted without due regard as to whether soil and subsoil are in any way suitable for them, with the result that in the majority of cases they are in very indifferent health. Where this state of things exists this is a good time to see about their removal, with the view of giving them in the first place a more congenial compost and restoring them to health. It may be noted that where this is necessary it is not advisable to dot the plants about as single specimens, but rather to group them together in some large beds where effectual provision can be made for their reception. Where the natural soil is not suitable it must be excavated as deeply as the plants are likely to penetrate (they do not root deeply), and if a supply of peat is not available, a fairly good substitute may be found in a compost consisting of two parts turfy loam, one of leaf soil that is free from sticks and the fungoid growth that is associated with decaying wood, and one of dry cow manure, each ingredient being thoroughly chopped to pieces and the whole well mixed together. Any plants that are in indifferent health should, when lifted, undergo an examination of the roots, and anything here that is dead or partially decayed should be cut clean away; also, if the condition of the roots is not satisfactory and the plants are on the dry side, it is advisable to soak the balls before planting rather than giving a lot of water after planting; in fact, cultural operations in this direction would be identical with those found essential in the case of hard-wooded greenhouse plants. A good thick mulching of half-decayed leaves may be put on the beds after the planting is finished, and if at the end of the first season in their new quarters the plants have benefited by the change and are doing well, the mulching to be afterwards annually applied may consist of cow manure. With these evergreen shrubs may be associated groups of deciduous Azaleas—their flowers will show to advantage against the deep shiny green foliage of Kalmias and the choicer Rhododendrons; whilst, if an edging is considered necessary, this may consist of a broad band of hardy Heaths. If a summer display is required in such beds, the spaces between the shrubs may be planted with Lilies and Gladioli in variety, also Galtonia candicans. Any such planting should, however, be done thoroughly; an occasional flower popping up here and there is not satisfactory and has a patchy appearance. If the propagation of the choicer deciduous-flowering shrubs by layering was carried out last season as previously advised, the layers, if not already lifted, will now be nice plants, and may be carefully removed. They will be acceptable for grouping in any bare spots in shrubberies, or, if time permits, common evergreens can be taken away to make room for them. It is advisable if possible to group together a fair number of each variety or species; a better and more imposing idea of their beauty is thereby obtained. E. Burrell.

Ferns.

ADIANTUM FARLEYENSE.

Although there is little difficulty in growing on healthy young plants, it is difficult to get old plants, or those which have got into a bad condition, back into a healthy state again. To have healthy, vigorous plants, young stock must be grown on from time to time. As this Fern never matures spores, it is necessary to propagate by division. The best time for doing this is early in the spring, when the plants are growing freely. I find when old plants are divided they are very slow to become re-established, but if young plants which have not got pot-bound are divided into, say, three or four and carefully handled, they will start away without losing a frond. They should be potted in rough porous compost—good fibrous loam, leaf mould and plenty of sand. Plenty of drainage should be used, the plants being potted moderately firm. When divided they will require to be kept close and shaded for a few days, and care must be taken not to give too much water. After the plants have taken root into the new soil they should be gradually exposed. In the after-treatment the main point is careful attention to watering. In many instances over-watering is the cause of failure, while there is nothing more damaging than to allow the soil to get too dry. After the pots are well filled with roots the plants will take a deal of water; in fact, there are few Ferns which take up more water than healthy plants of Farleyense. A regular temperature—which should not fall below 60° or rise above 70°, unless by natural summer heat—is better than giving too much artificial heat. A light shading is necessary during the summer, but plants should never stand under the shade of others or be crowded up. If stood up on inverted pots or suspended to the roof, they will thrive well and the fronds will be of better substance than under heavy shading and moisture, besides which, the young fronds will have that lovely pink tint which is so much admired in Ferns. I have grown A. Farleyense among other plants where it has been necessary to use the syringe freely, and have not found it suffer thereby. The chief causes of failure are over-potting, heavy shading and over-watering. H.

HARDY FERNS IN WINTER.

Our British Ferns when growing in their natural habitats find ample protection during the winter from the leaves and grasses which gather round them, and their own ripened fronds also afford further protection; besides which, they are mostly found in very sheltered places. This is not always taken into account by those who cultivate the British Ferns, and when we get a severe winter like the last a great number are entirely destroyed and others so much crippled, that it takes a whole season for them to recover, and even then they do not make such nice plants as those which have had sufficient protection to keep the crowns in good condition. One great cause of hardy Ferns suffering more when under cultivation than when growing naturally is that they make their growth, or rather continue to grow later in the autumn, and are not so well ripened. They also are much more liable to suffer when grown in pots, more especially if the pots are not plunged into the ground. I do not recommend giving any artificial heat to keep off frost, but all grown in pots should be plunged. In a pit with a northern aspect is the best position, but, failing this, anywhere in the open ground will answer nearly as well. All the deciduous kinds may be covered up on the appearance of the first frost. A good covering consists of a few pea sticks or other brushwood being laid over first, and then a good covering of Bracken for preference, and if this is not at hand, straw may be used. The Scolopendriums, Polystichums, and other evergreen sorts should be uncovered during mild weather. I may here mention that Scolopendriums, though among the hardiest, suffer much from frost if they have been making fronds late in the autumn. Young plants also require protection. If they can be kept in a pit with lights over them, they must be opened as soon as the temperature rises above freezing point. Those which have ripened off early in the autumn will make a fresh start if given the slightest encouragement, and will then suffer as soon as we get a return of frost. Even when growing wild I have seen many instances where they have started early in the spring, and then have been cut down by a late frost. This has been particularly the case with the Athyriums. Although every care should be taken to prevent hardy Ferns starting prematurely, after they start naturally in the spring, a little warmth will be beneficial rather than otherwise. We now have some very beautiful varieties of the Lady Fern (Athyrium Filix-fœmina) which make splendid subjects for pot culture, and when started early in the spring in a cool house where the temperature can be kept just above freezing point, such varieties as plumosum dissectum, superbum, pulcherrimum, Kalothrix, &c., are among the most beautiful subjects that can be found. It will not do any harm to start hardy Ferns early in the spring provided they can be protected in case of frost. Those ripened off early in the autumn will start away freely without much encouragement.

If a little more attention were paid to the natural requirements of our British Ferns, I think they would become greater favourites than they are at present. A. Hemsley.

Garden Flora.

PLATE 1044.

ROSE G. NABONNAND.

(WITH A COLOURED PLATE.*)

New Roses are forthcoming as regularly as the season for planting rolls round, and nearly every year sees some particular variety permanently added to its class. The number of selected ones is very disproportionate to the rejected of the same year, but this is inevitable, as we judge the new ones from a high standard of merit. In 1889 two first-rate Tea Roses, quite opposite in character, but equally deserving of popular favour, appeared. To one of these, Ernest Metz, a very full measure of favour has been accorded. This Rose happens to be favoured by exhibitors, and consequently its merits have been made well known by its frequent appearance at Rose shows. On the other hand G. Nabonnand, the Rose here figured, and which also appeared in 1889, is one that exhibitors would never bring prominently forward, yet of all the Roses that the last decade has brought us there are none more pleasingly distinct or consistently beautiful. All who, disregarding past traditions of Tea Rose culture, are now endeavouring to make these

* Drawn for The Garden by H. G. Moon at Gravetye, Sussex. Lithographed and printed by Guillaume Severeyns.



ROSE G. NABONNAND

lovely Roses one of the summer features of their garden by growing them in bold groups, must include G. Nabonnand. The plant has a good robust constitution, growing freely and fairly tall, in this respect much resembling another fine kind for grouping, namely, Mme. Charles. It is second to none for persistency of blooming, but of even more importance is its all-round value alike under the varying conditions of sunshine and showers that make up our variable summers. It is hardly possible to recall two successive Rose seasons marked by such extremes of favourable and unfavourable weather as those of the past two years, and it is strong testimony to the merits of this new Rose that it was first-rate in both seasons. The brilliant sunshine of the past summer and autumn, sun-dyed the flowers with glowing tints that were not present the previous year, but the form and delicious scent are apparently fixed and constant charms that every season will permit us to see and enjoy. The accompanying plate shows rich colour-harmonies that words would fail to justly describe, and although the brilliancy of the colour may vary with the time of year, flowers are sure to be abundant and fine throughout the long period of Tea Rose days.

The Week's Work.

KITCHEN GARDEN.

Sowing Peas for planting.—For a good many years I followed the common practice of sowing my first early Peas in January or February in small pots, and giving them the heat of an early vinery or Peach house until an inch high, removing them afterwards to a cooler house for a fortnight, and finally to a frame. I have, however, abandoned that course, having seen the good results secured by several gardeners by sowing early in December and standing the pots in cold frames. There is not much labour attached to this; the chief thing needed is plenty of air, as the soil needs very little water until the growth shows itself. Instead of the orthodox small pots, those 4 inches in diameter are used, draining them well and using a good stiff loam, kept open by the addition of a little fine mortar-rubble, or road grit. Sow thinly, as crowded growths not only smother each other, but the roots get so entangled that much damage is done when the ball is slightly broken at planting time in March. The pots should be plunged to the rim in either ashes, leaf-mould, or cocoa fibre, and the lights covered on very cold nights. As regards varieties, I grow Chelsea Gem and Stratagem. The latter is very hardy thus treated, and comes into use about the time Chelsea Gem has been gathered. Another capital medium-height Pea, and one possessing a grand constitution, is Wordsley Wonder. It is simply astonishing how this variety will yield under good culture, the individual Peas also being much larger than most of the early white-seeded sorts. An eye should be given each morning when air is given, as a single mouse will ruin a whole batch in a few days. It is a good plan to peg down a few branches of Furze round the sides and ends inside the frames. This will often prevent mice from gaining an entrance.

French Beans in beds.—Where the pits or beds in Melon or Cucumber houses are not wanted for plants, they may now be profitably utilised by first laying a good foundation of leaves in a fresh state and placing thereon 6 inches or 8 inches of light loamy soil containing a fourth part horse manure, the same being first made firm, afterwards drawing shallow drills with the trowel a foot apart. French Beans may then be sown, no variety succeeding better under this mode of culture than Sion House. The bottom-heat valves, if any, must be turned nearly off so as to reduce the heat at the roots to about 70° or 75°, aiming at a top temperature of from 60° to 65° and keeping up a moist growing atmosphere. With a moderate heat of this kind red spider is never troublesome, and the plants do best if not syringed overhead, especially when in flower. Beware of over-watering, as the stems, when in a young, soft state, are very prone to rot at the base. As these become hardened and the foliage more abundant, two waterings weekly with weak farmyard manure water will help them much, stirring the surface of the beds at intervals to admit air. A little fresh air should be given daily in fair weather, even when sun is absent, closing at 2 p.m. and keeping the evaporating pans supplied with a little weak liquid manure or guano. Where two beds exist in the same house, the second one should be sown as soon as the first lot of plants shows for bloom. When resowing, fresh soil need not be given, the same answering well if it is well stirred and a little artificial manure added. Some growers prefer to sow in pots and plunge them in the beds of leaves, and certainly this plan has much to recommend it, as plants at this season are much less liable to suffer from over-watering when the roots are confined to a narrow limit.

Forcing Lettuce.—Where plenty of Lettuce in spring is imperative, it is well to sow now seed of any of the small Cabbage section, and to prick it out on a gentle hot bed at the end of January. Sow in a box and place in an intermediate house, thinning out as soon as the seedlings can be handled, and raising them close up to the roof glass to ensure a stocky growth. If All The Year Round or Tom Thumb is used, it is astonishing what a lot of good Lettuces may be cut in April from a two-light frame raised on a bed of warm leaves and manure, and surfaced with 6 inches of good garden soil. Of course with a fair winter those protected by cold frames will supply all spring wants, but as one never knows what frost is in store, it is always safe where there is a heavy demand to provide against all possible contingencies. It is almost useless sowing the Cos varieties at this season, as their growth is not only much slower than that of the Cabbage varieties, but weaker also.

Preparing frame potatoes.—It is now quite time tubers of Sharpe's Victor, Mona's Pride, or Ringleader were placed in order in boxes, and given comfortable quarters in a greenhouse or tolerably close to the windows in a warm potting shed, in order that they may come on gradually and form Sprouts an inch long by the second or third week in January. This is a far better plan than postponing it until a week or two before they are wanted for planting, and then forcing them on unduly in warm vineries or Peach houses. I like to put a little leaf mould in the bottom of the boxes for the young roots to work into, as if lifted out with care these may be preserved whole, and a much quicker and robust after-growth ensured than when the tubers are entirely without roots. When, however, too much rooting material is placed in the boxes, basal rot often follows, or a superabundance of roots is made, making it quite impossible to separate them.

Seakale thongs.—As each batch of Seakale is prepared for forcing the root-thongs should be saved and cut into lengths of about 6 inches, the top portion being made quite smooth, and all finally laid in a box or frame and covered with fine sharp soil to induce an early callus and sprouting. When sufficient has been saved in this manner for the earliest planting the rest may be laid in out of doors, the foot of a south or west wall being the best situation. Some lay them in roughly at trimming time, and cut them over later on, but this is a loss of time and brings growth much later in spring. Where the Lily White is grown, as many thongs as possible should be saved, as this is undoubtedly an advance on the old variety, although, in my opinion, less adapted for very early forcing.

Early Radishes.—It is possible to obtain nice tender Radishes early in the new year by sowing now on a gentle hot bed and covering with a frame. In forming the bed the use of stable manure should be avoided, as the least excess in bottom-heat causes a spindly growth and invariably ends in failure; use all leaves, tread firmly, and allow about 6 inches of light open soil for a rooting medium. Sow French Breakfast and Wood's Frame, thinning out very freely as soon as possible, and admitting plenty of air from the time germination takes place, as coddling is ruinous, especially at this time of year. Growers about London sow in open beds at this date and cover with long litter, but constant attention is in this case necessary, the litter being removed each morning in fine weather and replaced at night.

Mint and Tarragon.—A sufficient quantity of roots of these two herbs should now be got under cover to meet the demands of spring. Mint does very well in moderately deep boxes, a fair proportion of rotten manure being mixed with the soil. Tarragon responds well to the same treatment, and by getting it in now undue forcing is avoided and the growth is sturdy. For early use a few roots of Mint may be laid on the border of an early vinery or Peach house and covered with leafy soil, keeping it moist with the syringe. Sow Mustard and Cress in small quantities and often, rather than large boxes at one time, as it quickly becomes tough and uneatable during the winter months.

Preparing soils.—Take the earliest opportunity of laying in a sufficient bulk of soil for use in spring. It is now in a comparatively dry condition, and success in growing early Tomatoes, Cucumbers, Melons, French Beans and other spring-sown subjects very much depends on the condition of the soil in which the seeds are sown. Frost and snow may occur at any moment, and if once the compost gets into a wet and sticky condition, it is not easily remedied. A good cartload will go a long way in sowing and planting these early crops. J. Crawford.

HARDY FRUITS.

Planting operations.—The weather so far has been favourable for planting on light soils. I admit the last week in November was not at all good on clayey land, rain falling daily. The planting should now be pushed on rapidly, as in my opinion, fruit trees do much better when planted at this season than when this work is deferred till the year is well advanced. It may be thought advisable at this season to destroy worthless trees, and no time should be lost in selecting new ones. It is useless to allow old worn-out trees to cumber the soil; they do not add to the appearance of a well-kept garden, and in many cases harbour all kinds of insect life. Again, some of the very worst kinds, among Pears especially, form the most shapely trees, and one hesitates to remove them. We have but a limited number of really good Pears, and their season is but a short one, so that only the best should be grown. I noted the importance of careful planting in an earlier calendar, and need not repeat my remarks. I would urge the necessity of fresh soil for new trees in impoverished land, omitting manure except in the way of a final mulch on the surface after planting. Much of the work as regards preparation can be pushed on before the trees arrive. In clay land it is not well to puddle the soil, but whenever possible a fresh site should be given new trees. The latter remarks are also even more applicable to bush trees. Gooseberry bushes should never get the same position the former trees occupied. Currants get their roots covered with a white fungus in poor soils, and even old trees, both of Gooseberries and Currants, if carefully lifted well repay for new soil and replanting. Trees that arrive during frosty weather should be placed in a cellar or cool store till thawed. If kept moist at the roots they may be planted at the first favourable opportunity.

Pruning fruit trees.—This will be one of the most important details in this department at this season. As regards pruning it is difficult to advise as the trees require diverse methods on certain soils and stocks, and the way in which the trees are grown. I am aware in many gardens it

is impossible to allow the free growth some kinds require. There must be small bushes, and these certainly have a nicer appearance than trees of all sizes and shapes. In such a case root-pruning is a necessity. In fruit gardens one may give the various kinds the treatment required. Take the case of drooping varieties of Apple trees. To cut these hard back is a mistake, as the fruits in some instances are borne on the points of the shoots, and if severely cut there would be little return. I am a great advocate for thinning out where it can be practised, and if a certain amount of shortening back is done occasionally, the trees do not get unsightly or cease to bear. This is more advantageous than severe pruning yearly. Much can be done during the summer in the way of removing gross shoots, so that at this season but little pruning is required with small trained trees. Wall trees should not be allowed to make long ungainly spurs, as if these are allowed the trees do not get the benefit of the warmth the wall affords and but few fruits are obtained. Now is a good time to reduce the numbers and shorten back the spurs. If a certain number are cut hard back at equal distances all over the trees, doing the work in two or three seasons, the trees will be then well furnished with short fruiting spurs. In pruning, the Cherry, Pear, Apple and Plum should be gone over first, leaving the Peach and the Nectarine till the latest moment possible. Newly planted trees should not be pruned now, shorten the tops if desired just before growth commences in the spring. Cherries such as the Duke and Bigarreau section fruit mostly on spurs, and any long shoot not wanted for extension should be cut back to the second or third bud from the base. In nailing in terminal shoots avoid crowding as the trees soon get infested with black fly when crowded.

Peaches and Nectarines in winter.—Many good growers advise leaving the Apricots till early in the year before pruning. I do not. In my case there is little to prune, as by attention to summer stopping, the chief work is extension of terminals, giving more room and equalising the space between the new wood. By allowing the trees to grow freely there is less canker and gumming. The Apricot being the first to open its flowers, it is well to attend to it first. Remove poor surface-soil down to the fibrous roots and top-dress with good loam, decayed manure and bone-meal. The trees always do best when the roots are near the surface. The Peach and Nectarine flowering early, it is advisable to retard the bloom as late as possible and to harden the wood by exposure. To effect this it is a good plan to unnail all new wood of the last season or wood with fruiting buds. By so doing the wood is hardened, the buds retarded, the shoots also get well cleansed by winter rains and are ready for pruning just as the buds begin to move. When these trees are dirty, it is well to remove as many ties or supports as possible, well cleansing with quassia and soft soap or soluble paraffin, and then giving the strong branches new ties and burning old nails before using again. It may be necessary with trees badly infested with scale to paint the old wood with insecticide, as the pests have such a strong hold at the back of the branches. Peach trees which have suffered from mildew when at rest may with advantage get a thick solution of sulphur with a small portion of fresh lime to make the sulphur adhere to the branches. This should well cover the trees and all parts of the wall, the dressing being more effectual when the young wood is free of the wall.

Bush fruits—Gooseberries.—The pruning of these trees is often delayed as long as possible in consequence of the loss of buds by birds. The bullfinch and others will soon be on the alert and do much mischief. I do not advise delaying pruning, but take measures to keep these pests away. I am not an advocate of the severe pruning often practised. Of course it is necessary to well spur back the plants trained on walls, but the close cropping over is not advisable. I advise the thinning of shoots, shortening loose or straggling branches, cutting back to a well placed inner shoot and removing of sucker growth, shortening any branches that press down towards the soil. It is not necessary to thin severely, only sufficiently to admit light and air and gather the fruit. I prune half the trees rather severely one year and do not prune much the next, merely taking out cross shoots and suckers. By this means I have one half with a heavy crop, those hard pruned only bearing a light one, but the fruits are larger. To preserve the buds after pruning, it is well to give the trees a thorough syringing with fresh quicklime and soot, well covering all parts of the trees. Near towns where sparrows are plentiful, the mixture may be made with quassia water. After much rain the trees will need redressing. By pruning now and manuring, forking between the rows, the quarters present a neat appearance and the trees get the benefit of the food given, rains washing the food to the roots.

Gooseberry pests.—In many old gardens the caterpillar and red spider were most destructive last season. The latter is easily got rid of, as it only thrives when moisture is deficient, but unless the trees are well cleansed it is likely to reappear next season. A thorough washing with Gishurst compound, with a little sulphur added, will remove all traces of the pest. Fresh lime for scaring birds also cleanses the trees from these pests, and, in damp localities, prevents Moss growing on the older branches. For caterpillar, different measures must be taken, as the grubs are in the surface soil and in cocoon form, ready to attack the trees next summer with increased vigour. I advise the removal of old surface soil from under trees. Burn the soil removed, and replace with new, enriched with manure and bone-meal, giving a dressing of fresh lime before adding the new soil. In districts where tan is readily obtained, a good dressing of fresh tan or gas-lime broken finely and placed on the surface at this date will kill the grub.

Currants.—The pruning of these should now be completed and the space between the trees forked over. The Red and White Currants require similar treatment. The branches require to be closely spurred in to within half an inch of the main branches. The tree should be open in the centre. Any terminal or leading shoots must be cut, according to the size of tree desired. Black Currants are not pruned like the above, but treated more like Gooseberries, that is, the shoots thinned. These fruits are often too much crowded. It is well at times to remove a small number of old branches, and train a few of the strongest new shoots to take their place. Birds also take the buds, and the dressing advised for Gooseberries should be used after pruning. It is not too late to get new trees from cuttings of bush fruits. Select strong shoots, shorten to 12 inches or 15 inches in length, remove all buds half way from the base, and then plant in drills 6 inches deep, the cuttings 6 inches to 9 inches apart; well firm the cuttings as the drill is filled in. Replant next autumn in rows 18 inches apart each way in well-manured land. G. Wythes.

Birch for brooms.—It is customary in some large establishments for the garden labourers to make brooms in stormy weather, and as the material is always better for being stored for a time before being used, the present is a capital time of year to cut a sufficient quantity for one year's use. If large branches are cut and stored away in a dry, cool chamber they will gradually harden without becoming brittle. A handy labourer will make several dozen brooms in a day, and as a rule they are far more durable than those purchased from hawkers.—J. C.

A good turf for poor soils.—The best of all Grass-like plants for furnishing and embellishing dry positions and poor soils is Carex alba. In the course of last summer, when all the Grasses on our mountains were parched up and wretched looking, Carex alba looked luxuriant and thriving even when growing in the most unfavourable positions. So much were we impressed by it that we introduced some tufts of it into our Alpin Jardin d'Acclimatation, where we subjected them to very severe tests in dry positions without the least detriment to the green appearance of the plants. This Carex is perfectly hardy, withstands not only very dry weather but also excessive moisture, thrives in the stiffest and most compact soils, and flourishes even under large trees in positions that seem least favourable to vegetable growth. Carex alba is of a lively green colour, and the plant is quite as effective in its appearance as Rye Grass. Under trees and in dry, shady positions, and also in very exposed, arid places it succeeds where other plants would perish.—H. Correvon.

Orchids.

ODONTOGLOSSUMS IN WINTER.

It has been remarked in reference to these beautiful Orchids that they are of the easiest culture, and that they thrive well in a greenhouse, &c. Misled by these statements many persons have been induced to purchase plants whose accommodation for them is not only very limited, but eminently unsuitable. This is quite obvious from the number of queries that come to hand respecting their culture from persons who have little or no experience with them and have failed, not from want of attention on their part, but for the reasons mentioned above. I do not say that Odontoglossums, as a rule, are difficult of cultivation where they are properly accommodated and judiciously treated, but as subjects for a mixed house, be it stove, intermediate house, or greenhouse, they are certainly more difficult to keep in health than many other genera. They are, as a rule, very susceptible to changes in temperature or other atmospheric conditions, and this alone makes them unsuitable for growing in a house devoted during winter to a miscellaneous collection of plants, although it would be easy to name many cool house Orchids that would get along fairly well there. In choosing a house then for these Orchids a little thought may with advantage be given to the conditions under which they grow naturally. High up on the mountains the climate is moist and mild all through the year, and does not vary much in temperature; therefore high summer and low winter temperatures must be avoided. The day and night, too, being probably nearly equal, it is obvious that during winter every ray of sunlight must be made the most of. It is for this reason that cool Orchid houses ought not to be built in heavily shaded positions, or anywhere in fact where the light is much subdued. The lean-to house behind a north wall so often recommended is all very well for the plants during the summer, but in winter they simply sicken from want of daylight. Another point sometimes lost sight of in their winter treatment is the need of fresh air moving about them. From a dislike of fire-heat many cultivators keep their cool house Orchids shut up like prisoners during the winter, and if a little ventilation is put on when the sun is bright, it is taken off early to make the most of the sun heat. Now only a little thought is necessary to prove the fallacy of this reasoning. Had the pipes been kept just warm the house could be opened earlier, thus drying up the night moisture and enabling the cultivator to use more water about the house, giving each plant that requires it a good soaking without any fear, and keeping the ventilators open until quite late in the afternoon. This is the way to make the most

of the sun-heat, or more properly to utilise the sun's action. But if fire-heat is valuable when the days are bright and the nights cold, it is doubly so during the spells of damp, dull weather so frequent at this time of year, for by its help the cultivator is enabled to keep the ventilators open both night and day, and at the same time the temperature from unduly falling. Briefly then, what these Orchids require at this season is a constant and unvarying temperature, copious supplies of fresh air on all possible occasions, and full exposure to all the light obtainable. To aid in this latter, as well as to ensure the full advantage of the air currents, the plants are usually elevated on inverted pots, instead of being placed on a flat stage, and this also admits of the syringe being freely plied between them in bright weather without wetting the surface of the compost. In low span-roofed structures with a central path and side stages, this mode of arranging the plants is an admirable one, but, in doing so, the plants nearest the path must be kept on a level with those nearer the eaves of the roof, and not, as is too frequently the case, a foot or more below them, or the amount of light obtained by the former will be but little. With regard to

Watering

at the root, the quantity needed will depend on the state of growth. Although with one or two exceptions, Odontoglossums do not require to be dried off during the winter, most of them require less water than in the summer months, especially such as have finished up their pseudo-bulbs. All the O. crispum, Pescatorei, luteo-purpureum, triumphans, and similar species usually root freely in late autumn, and, taking advantage of this circumstance, most growers repot these in September or October. It is these plants just rooting well into the new compost, and in many cases swelling up their bulbs, that require most water now, while others with their pseudo-bulbs, quite matured and not as yet showing the spikes, will need a somewhat diminished supply. The smaller growing members of the genus, as O. Cervantesi, O. Rossi, O. Oerstedi and similar kinds, require a good deal of care in watering. They all delight in moisture, and being of small growth are easily injured if kept dry for any length of time, but are none the less very easily overdone in this respect. What they all like is a very thin layer of compost, and then there is little fear of their being over-watered if ordinary judgment is exercised. The vexillarium and similar types now grouped under Miltonia, are still occasionally styled Odontoglossum, and these require a fairly liberal supply, the roots being active all through the winter, collecting moisture for the development of the new growths. O. grande may be noted as requiring less water than the majority, the flowers being mostly over and the plants at rest, the same being the case with O. Insleayi and O. Schleiperianum. O. Edwardi is easily over-watered at this season, for though some of the plants are already forming young growths, these and the advancing flower-spikes procure a good deal of nourishment from the large pseudo-bulbs. The distinct and beautiful O. Londesboroughianum is not everywhere a success, and this is frequently the result of the loss of roots consequent on injudicious watering. The grower of the best plants of this remarkable species I ever saw assured me that from the time the blossoms were past until the new growths started, the quantity of water these received was practically *nil*, and the same treatment holds good in respect to O. citrosmum, which from the present time until the flower-spikes appear should be kept perfectly dry at the roots. The plants will shrivel a good deal without doubt, but will soon plump up when they are again watered. H. R.

Cypripedium names.—During the last four or five years at least 500 new names have been added to the Cypripediums, and it is a question whether these are all sufficiently distinct. Take, for example, C. Ceres, C. Fascinator, C. Medea, and C. Marchioness of Salisbury, the result of crossing C. Spicerianum with C. hirsutissimum. Surely, however distinct, it might have been considered that the original name of the cross, C. Charles Richman, should have remained. My experience is that out of fifty plants obtained from the same pod of seed one could get at the least forty varieties, some with a few more spots and others a shade or two darker in colour. Is this, however, sufficient distinction to merit a new name? The Orchid committee seems to think so. I am quite aware of the difficulties under which the committee are placed, but they have a code of rules which appear to be followed as much in the breach as in the observance. I believe the rules are laid down that all exhibits shall be named in Latin, and a reference be given to the botanist who has described the plant. This latter part might certainly be cut out in respect to hybrids, for the Kew authorities decline to deal with them, but in the case of species they are always willing to render every assistance. If the Latin naming was strictly adhered to, it would do away with useless and unnecessary names. The committee, by setting their faces against complimentary names, such as Charles Canham, the Hon. Mrs. Astor, &c., would benefit all lovers of Orchids.—Stelis.

Cypripedium insigne Maulei.—This is one of the best varieties of C. insigne, and the parent of many fine hybrids. Originally selected from an importation of the type by the late Mr. W. Maule, of Bristol, it has found its way into a great many collections, though it is by no means a common Orchid. The leaves are rather more erect than those of the type, and deep green. The flowers are large, the petals and pouch being similar to those of the type, the dorsal sepal much superior. The upper portion is pure white, with large spots of purple, the lower being also margined with white, the spots being brownish purple. Like the type, it is a very free grower and abundant bloomer, lasting many weeks in perfection.

LÆLIA ALBIDA.

This must be a very plentiful Orchid in its native habitat or it must have become extinct long ago, so many hundreds of plants having been imported into this country only to flower fairly well for a year or two and then be thrown away. It is a great pity more care is not taken with this lovely plant, for its extinction would mean a serious loss to Orchid growers. It is one of those species that seem to do well for a time in most places, afterwards going back by degrees; yet good plants are occasionally met with that have stood for years, and the question arises how best to treat them to bring about this satisfactory state of affairs. One cause of failure, and undoubtedly a very frequent one, is allowing the plants to become overrun with insects, especially a soft white scale. This troublesome pest, if not kept in check, soon paralyses the strongest plants by drawing all the juices from them. On the first signs of its attacks let the plants be thoroughly gone over leaf by leaf, carefully examining the axils and the basal sheaths of the pseudo-bulbs; under these and about the rhizomes it is pretty sure to congregate. The insects will not all be killed perhaps at the first attempt, so the leaves had better be again sponged in about a fortnight's time, and by this means one of the difficulties of its culture will be overcome. A more arduous task is how to provide the right kind of atmosphere and a suitable temperature for it. A house kept only a little warmer than the Odontoglossum house, a free circulation of air and plenty of atmospheric moisture, are the most likely to be suitable, and the plants may be grown on large rough blocks, or in small shallow pans. In either case they must be kept well up to the light, and a full supply of water is needed to the roots while growing, this being lessened, but not entirely withheld, during the resting period. Care must also be taken that the plants do not grow away from their rooting medium, roots growing only in the atmosphere not being sufficient to sustain the growth. The typical

Lælia albida produces erect scapes of flowers, each bearing five or six, the sepals and petals being white, the lip also white, suffused with rosy purple, and having several lines of yellow through the centre.

L. a. bella is a large-flowering and handsome form, similar to the type in shape, but having all the segments tipped with rosy lilac, and the same colour lightly suffused on the petals.

L. a. sulphurea is of a yellowish tint in ground colour, the lip being soft rosy magenta, with orange centre. All the varieties are natives of Mexico.

Masdevallia ignea.—Several plants of this pretty species now being in flower give an opportunity of comparing the varieties, and very beautiful some of these are. The typical flower is about 1½ inches across, of a bright orange-red, and, being very lasting, contributes largely to the winter display. Considerable care is necessary in watering these Orchids at this season, especially if they have been long in the pots and the compost consequently at all close. While easily injured by over-watering, the opposite extreme must be guarded against as equally injurious to the well-being of the roots. M. ignea is a native of New Grenada, whence it was introduced in 1871.

Cypripedium concolor. — This delightful little species is now in bloom, the pretty spotted flowers having a great attraction for lovers of Cypripediums, and contrasting well with the handsomely-marked foliage. C. concolor likes a warm house, and must be grown in a shady, moist position out of the reach of draughts. The pots must be thoroughly clean and well drained, and the compost generally used for it consists of peat fibre, loam, and Sphagnum, with limestone added in lieu of crocks and charcoal. There is considerable variation in the flowers, those of the type being creamy white, with rosy crimson spots, while the variety sulphurea is wholly yellow.

Oncidium ornithorrhyncum. — The light and graceful spikes of this pretty Oncid are admirably adapted for cutting, the plants are useful for grouping, and it is in short one of the best of the small flowered section. Being by no means fastidious in its cultural requirements, it is a species that may be taken in hand by anyone having a little experience among Orchids and is sure to give a good account of itself at flowering time. The individual flowers are small and rather insignificant, but when viewed collectively they are very beautiful, the colour a soft rosy-purple; they last for some time in good condition and are very sweetly scented. It is best grown in a house intermediate between the Cattleya and cool houses, or if this is not at command it will get along very well at the cool end of the former. A shady position and abundance of atmospheric and root moisture are essential to its well-being, and during winter it must not be over dried. Three parts of peat to one of Moss will suit it well as a rooting medium, and only a thin layer of this is needed over abundant drainage. It is a native of Central America, whence it was introduced in 1826. The flowers of the variety albiflorum, a rare and very desirable plant, are pure white with the exception of a yellow crest.



Zinnia elegans double striped.



Zinnia elegans double pompon.



Zinnia Mexicana.



Zinnia elegans double Liliput.



Zinnia elegans nana double.



Zinnia elegans double.



Zinnia Mexicana double.

Flower Garden.

ZINNIAS.

It would be necessary to go back to a somewhat distant period in the past in order to come upon the date at which Zinnia elegans (that is, the single-flowered typical species) was introduced into Europe. This species, with flowers of various colours, red, scarlet, purple, white, and yellow, was for very many years cultivated in flower gardens. In the year 1858 a new form of it made its appearance under the name of Zinnia elegans flore-pleno and created a great sensation. This variety flowered for the first time with M. Grazau, nurseryman, at Bagnères, amongst other plants raised from seed received from the W. Indies. The first plants raised from this seed were sold in France by the firm of Vilmorin-Andrieux and Co., Paris, and in England the establishment of Messrs. Carter raised plants from seed obtained from the same W. Indian source. Great was the surprise caused by the first appearance of the flowers. The *Gardeners' Chronicle* of the period relates that "A box received from Paris, when opened, appeared at first sight to be filled with a new race of double Dahlias, but when the contents were unpacked and examined more closely, they were found to be a collection of Zinnias of the finest form and colour." The new variety proved to be a great success, and soon found its way into the gardens of all classes, notwithstanding the rather stiff habit of the plant and the somewhat monotonous regularity of the flowers, with their rigid, imbricated petals of slightly metallic aspect. At first the seeds when sown yielded a pretty large proportion of double-flowered plants; some were only semi-double, and the form of the flowers was more or less flat, or more or less bulging, but by rigorous selections the proportion of double-flowered plants was soon increased, and at the same time the form of the flowers was greatly improved. As for the single-flowered typical species, there being now no great object for its retention in gardens, its culture was ultimately discontinued altogether, so that at the present day it would be difficult to find it grown anywhere outside of botanical gardens. The double-flowered Zinnia elegans is now too well known to require any description here. The object of the present article is rather to acquaint the reader with the different stages or phases of modification and improvement through which the original variety of 1858 has since then passed. The first improvement obtained by culture was in the form of the flower, which, from being flat, gradually became more and more bulging or rounded, so that at present in some cases the length or depth of the flower-head is equal to its width. Next a great variety of colour was obtained, ranging from white, through yellow, red, and purple to deep violet, while more recently a variety has been raised which has the flowers striped and variegated somewhat after the fashion of the Flemish Pinks, Italian Verbenas, &c. A few years since a variety of Zinnia elegans with large double flowers was raised and fixed by a French grower, the plant being stouter and more robust in all its parts, and growing to a height of from 2 feet to over 2½ feet. The flowers of this variety are very broad, but are rather flat (although some improvement has already taken place in this respect), with long, imbricated, and slightly reflexed petals. They range in colour from flesh-white to violet, and the variety being remarkably vigorous in growth is very effective when grown in flower beds or as an edging around groups or clumps of shrubs of a certain height. Another very interesting sub-variety of Zinnia elegans flore-pleno is the dwarf double form, which grows only from 12 inches to 14 inches high, is very branching in habit, and has regular, well-shaped, long-lasting flowers. Like the other varieties, the flowers of this have a wide range of colour, and they also exhibit such a diversity of form as would lead one to consider them distinct varieties, for while the white, scarlet, and violet-coloured flowers are very large and flat, the yellow, purple, and salmon-pink-coloured flowers are smaller and more bulging or rounded in shape. This dwarf sub-variety is particularly suitable for flower-beds, edgings and borders. Other very interesting sub-varieties were raised some years since, notably the pompon double Zinnia elegans, quite a distinct form, not so tall-growing as the ordinary form and seldom exceeding 18 inches to 20 inches in height. The flowers, which are perfectly double, with narrow, closely-set, imbricated petals, are smaller, but more numerous than in the ordinary form, and are also of a more elongated, bulging shape. The plant is also more branching in habit, and is a very valuable subject for flower-beds and borders. Then there is the Lilliput double Z. elegans, a reduced form of the pompon double Zinnia, not exceeding 14 inches to 16 inches in height. The flowers, which are real miniatures, rather resemble the varieties of the very small-flowered Dahlia Lilliput; they are very double, bulging or rounded in shape, and have long stalks, so that they are useful for cutting and putting into vases or bouquets.

One of the great advantages of the double-flowered Zinnia, and of all its sub-varieties as well, is the length of time during which the plants continue in bloom, and especially the long duration of the blooming of each individual flower-head. With respect to this, it may be mentioned here that, by the prolonged successional development of the petals, which progresses from the exterior of the flower-head to the centre, the blooming of one single flower-head may continue for a month or more, a quality which considerably enhances the ornamental value of this interesting composite.

About the time when Zinnia elegans flore-pleno first appeared, another species—Zinnia mexicana, introduced from Mexico by M. Haage, of Erfurt—was already in commerce. This species, which is quite distinct, has much smaller flowers than Z. elegans. They are of an orange-yellow colour with a brownish conical disc or receptacle; the petals or ligules are lanceolate-oval, and the leaves are sessile, sheathing the stem, those on the upper part of the stem being narrower.

Although much less ornamental than Z. elegans flore-pleno, nevertheless Z. mexicana (Z. Haageana, Regel) is a very good plant. It flowers at the same time and thrives in the warmest positions and even in the driest soils, provided they are of a somewhat stiff or compact character, blooming more abundantly in proportion to the heat which it enjoys. The plant grows to a height of from 12 inches to 16 inches. A double-flowered variety (Z. mexicana flore-pleno) has been raised from it, which is much more ornamental and continues longer in bloom than the typical single-flowered species. This fresh gain to horticulture may be advantageously employed to form an edging to flower borders or around groups or clumps of shrubs.

Diapensia lapponica.—Of the plants which occur in northern regions this is certainly one of the most charming and most worthy of cultivation. In habit and aspect it somewhat resembles Azalia procumbens, but is of more compact and tufted growth, forming a hemispherical cushion composed of numerous rosettes of thick, spatulate, obtuse, entire, imbricated leaves. The flowers are white, solitary, with a well-opened campanulate corolla, which is divided into five spreading obtuse lobes. Like the flowers of the Ericaceæ, they are very persistent. In the wild state the plant is found in arid, sunshiny positions in the northern parts of Norway, N. America, and throughout the entire Arctic circle. It covers the summit of the North Cape with carpets of vegetation, presenting almost the appearance of the Lichens with which the plants grow intermingled. The culture of Diapensia lapponica is not at all an easy matter, and we have had a good deal of trouble in attempting to succeed with it in our alpine garden at Geneva. We have only done so satisfactorily since we took to growing it in pans provided with numerous holes in the bottom, so as to ensure very rapid drainage. A very porous soil also is necessary, consisting of one-third leaf-mould, one-third Sphagnum, and one-third sand, together with full exposure to the sun. In England, where Diapensia cuneifolia (Pyxidanthera barbulata) is often grown for D. lapponica, I think the addition of Sphagnum is unnecessary, the atmosphere there being moister. The plant can only be multiplied from seed; there is no use in trying to propagate it by division, as it invariably perishes when that is attempted. The seed takes a long time to germinate—often eighteen months—but if sown when freshly gathered, it germinates in a much shorter time. —H. Correvon.

THE GLADIOLUS.

I, and doubtless other florists, have been greatly pleased and interested in the beautiful plate of handsome varieties of the Gladiolus shown at page 420 of The Garden. What we do want for our gardens is a hardy type that will flower undisturbed year after year in the borders. Many years ago I tried G. Saundersi with others in the border, and I found it stood well for several years and flowered annually, but it did not increase much and ultimately disappeared. The soil was rather clayey. I have often longed to have the chance of growing the Gladiolus on a suitable soil such as Dean Herbert wrote about, and in which he grew his hybrid Gladioli at Spofforth. The soil, he says, was "a light yellowish loam suitable for barley." Any amateur with such soil might easily raise many varieties, such as are figured in The Garden. G. Saundersi and other fine specific forms were unknown in English gardens when the "Amaryllidaceæ" was written. The author had to do the best he could with G. cardinalis, blandus, carneus, inflatus and tristis, yet from these species he produced what he termed "hybrid intermixtures" of every shade of colour, from white to scarlet, rose, coppery and blackish purple, and some exquisitely speckled in consequence of the cross with G. tristis. The point most worthy of notice is the fact that in Herbert's garden the clusters of bulbs stood out in the open garden for twenty years with the precaution of covering them with leaves from November to March or April. He advised sowing the seed in pots, giving the young plants shelter until they were pretty strong, "and then turn out the ball unbroken into the border, where they will produce a crowded nosegay of flowers of various shades of colour." I do not know any garden flower more easily raised from seed or which can be cross-fertilised with less difficulty. Why, then, need amateurs wait for new varieties to be raised for them in France or America? The great charm of gardening, to my mind, consists in anticipating the time when seedlings raised from cross-fertilised seed will produce their flowers. G. Saundersi has been in the country for about thirty years; as a

species it is very distinct, and the fine varieties alluded to in The Garden have abundantly proved its capabilities to produce fine garden varieties. When Mr. Cooper was collecting for the late Mr. Wilson Saunders he introduced two other very distinct species besides G. Saundersi, the most curious being G. dracocephalus, the flowers being closely striated with dull red-purple, and as many as five and six of them open on the spike at one time. G. Cooperi is also most curious, the flowers marked with purple-red on a yellowish base. When the last of the three (G. Cooperi) was figured in the *Botanical Magazine*, Mr. J. G. Baker wrote (see *Bot. Mag.*, tab. 6202): "Three very striking new species are now established in our gardens (alluding to the three named above), enlarging materially the groundwork upon which hybridisers can carry forward their experiments"—a useful hint which has but partially been taken notice of. Since that time G. Quartinianus, yellow flushed with scarlet, has been introduced; also the following: G. Kotschyanus from Afghanistan, quite distinct in character, the flowers bright lilac-purple; G. Watsonioides from Mount Kilimanjaro, the flowers very distinct with a curved tube and bright scarlet in colour. Lastly, the true G. oppositiflorus has been re-introduced and has flowered in the Royal Gardens, Kew. This is doubtless one of the parents of the beautiful garden varieties so much improved in English gardens by Mr. Kelway, of Langport; but hitherto all the improvement has been in one direction until the G. Lemoinei section was introduced, the exceedingly beautiful varieties Mrs. Beecher and Ben Hur being evidence of the immense improvement produced in a few years. The yellow varieties raised from G. gandavensis have hitherto been of poor constitution, but it is probable if Gladiolus Quartinianus was used both as a seed and pollen parent, more constitutional vigour might be infused into them; although it is a fact that the yellow colour of the flowers is transferred to the foliage, or the foliage acts upon the flower in some way, so that any varieties of Gladioli having yellowish flowers seldom continue long in good health. The seedlings are so easily raised that no one need be afraid of obtaining some measure of success. Dean Herbert's plan may be tried, or the seed may be sown in the spring in flower-pots, and the seedlings pricked out into other pots, but the safest and easiest way is to sow the seed very thinly in 6-inch or 7-inch pots, say about the end of March; plunge the pots in a gentle hotbed and the young plants will appear in about two weeks. To prevent their drawing up weakly, admit air freely to the frame, and in May the light may be pulled off whenever the weather is fine. The plants will grow splendidly and form nice corms strong enough to flower next year. The plan of turning out a potful of plants into the open border does not commend itself to a careful gardener, as the weaker plants may be destroyed in the struggle for existence, and if a specially fine variety should be produced, it might be difficult to separate it from the mass of corms without injuring many of those remaining. It is certain that in time the weaker would have to give way to the stronger, and the most vigorous varieties might not possess the finest flowers. The better plan is to separate the bulbs and plant them in rows, forming a bed of them in the flower garden, or if round clumps or clumps of irregular form are desired in the herbaceous border, they may then be planted in the spring, allowing a space of 4 inches to 6 inches from each bulb. If the soil of the garden and the climate are favourable, it may be well to try some of them out in the open borders all the year round. Wet districts would be unfavourable unless something was placed over them to throw off the water; mulching with decaying leaves would help to keep out the frost, but the leaves would retain wet. A cloche over the round clumps would be the most efficient protector. If the bulbs are lifted and stored, they should be placed where frost cannot reach them, and where they do not dry up too much. They should of course be well dried before being stored away.

J. Douglas.

FLOWER GARDEN NOTES.

Useful flowers for present planting.—If notes were taken from time to time of any specially useful flowers, now is the time to plant, and even if no great amount of space is available there are few places where room cannot be found for at least a few things that are in their respective seasons either of great interest in the open air or valuable as cut flowers. An instance of specialities may be cited in those white varieties of different species that are always in great request in comparatively rare plants that furnish flowers of very graceful habit, those flowers that stand exceptionally well in water, and those again that can be produced easily in quantity and that can, therefore, be recommended for special seasons of the year. In the case of white flowers one finds them in such plants as some of the Achilleas, Pyrethrums, Antirrhinums, the giant white Columbine, and later Spiræas, Phloxes, and the white Japanese Anemone, all of which can readily be increased by cuttings or division. Of plants with graceful flower-spikes that well merit cultivation, I may mention in their respective seasons such things as Heucheras, Montbretias, Sisirynchium, the comparatively new Tiarella cordifolia, and some of the Saxifrages. Several of these may be planted in beds of deciduous shrubs, and will make a pleasing feature in connection with the same. Montbretias and Sisirynchiums, for instance, as also Gaultonia candicans, I have grown for a long time among the hardy deciduous Azaleas. An enumeration of those flowers that stand well in a cut state would include many things already mentioned, besides the Day and Peruvian Lilies and other easily grown plants. Things to be planted in bulk for special seasons of the year must be grown to meet the requirements of different places. Besides Roses, I should be inclined to place among the most useful things Polyanthuses, Daffodils, Carnations, and Starworts. The time for planting Daffodils to secure a good display for the current season is getting over; indeed, many of them are well through the ground, and the earliest varieties have received a good mulching of leaves where such treatment is practicable. There are, of course, many other things among the herbaceous plants that would be found useful. I have, however, enumerated a few that are at once easily obtainable and easily grown. The planting should be well done, and in the case of gross feeding plants, as Pæonies, or those that once planted may be looked upon as fixtures in their respective situations, as Peruvian Lilies, the ground must be thoroughly and deeply worked, and a bit of really good manure being ready to hand, a liberal proportion may be added as the work progresses. In all cases where the plants specified in the above note have not been tried, I should strongly recommend that a start be made with at any rate some of them, the display made and the amount of flowers available for vases will amply repay the time and trouble.

Carnations.—Is layering beneficial to Carnations was the query at the head of a note in last week's Garden, and I should most decidedly answer in the affirmative if quality is required. The desirability of retaining old plants, pegging down shoots and allowing all to remain may be conceded where a mass of bloom is required, and, indeed, I always leave a bed for a couple of seasons, but have found the best flowers are obtained from strong layers planted in October in a bit of good soil. The necessity for replanting is I think apparent when one considers the dense mass of roots furnished by healthy plants; they must exhaust the soil quickly, the surface soil one is able to put on has not the holding power to carry plants through the season like deeply-dug, well-manured ground. Neither have I ever found in the case of the old crimson Clove that the retention of old plants is a preventive of disease, where this is locally troublesome both old and young plants have always been equally attacked. A great feature towards success is undoubtedly early layering and a close attention to the layers right away to planting time, so as to secure thoroughly well-rooted stuff; poor weakly plants are sure to winter badly. Our soil is rather on the light side, and I generally find it advisable to tread the borders well before planting. There is no doubt about the abundance of bloom furnished by two-year-old plants, and where we keep these over only a few layers are put down from each plant. As soon as these are taken away the soil gets a slight pricking up with a fork to the depth of about 1 inch, a good mulching of peat Moss or Mushroom manure is put on, and the shoots being evenly distributed all over the bed, are then pegged down. It may, I think, be taken as a fact that the majority of hardy plants throw flowers that are larger and of better quality from young stock; at least, this is so with Carnations, Pinks, Violas, Doronicums, some of the Campanulas, &c., to name only a few of dwarf habit.

Chimonanthus fragrans.—This, thus early in the season (December 1) is the feature of the flower garden, if we include in that term, as I think we ought, all beautiful shrubs and wall plants, as well as border flowers. This early flowering, although in a sense welcome, is not altogether desirable, from the fact that whilst in the bud stage the Chimonanthus will resist any ordinary amount of cold; this is not the case with expanded flowers, and so instead of having them fully developed at this time I would rather see them remain in the bud stage until after Christmas. They open then slowly, and after the break up of the severe frost will last in perfection a long time. Writing of scented flowers, reminds me of a disappointment experienced this summer. Wanting a few of the Carolina Allspice last winter for a particular corner, I ordered Calycanthus floridus, under the impression that this was the highly scented variety, but find the flowers of the shrub received and planted are absolutely scentless. Was I wrong in the nomenclature, and if so, what is the correct name, and if not wrong, what is the variety sent? I shall be very glad if anyone well acquainted with the shrub will reply, as the form to hand is worthless in comparison with the variety with the powerfully scented flowers.

Claremont. E. Burrell.

Layering Carnations.—My experience of the endurance of Carnation plants on the stiff Thames Valley clay at Bedfont was very different from that which "E. J." finds at, or about, Hampton. The soil there, however, is very different from the clay at Bedfont; indeed, if deep and stiff, yet it is of a black, porous nature, and Carnations might be expected to thrive upon it well. On the Bedfont clay were plants not layered, and this is in reference to hardy border varieties, so called, they would die wholesale, either the first or second winter. The soil being so heavy, water, after rain, would stand about the stems, thus promoting disease and rot. It was sometimes possible to help the plants through a winter by top-dressing them somewhat mound fashion, so as to throw off some of the water and protect the stems. Still, were not layering regularly performed there would have been few Carnations left alive from year to year. When Carnations are grown on light porous soil they will do well for many years, but even in that case it would be unwise to ignore layering of some of the strongest growths, so as to ensure the perpetuation of the stock. That would still leave some other growths

to carry blooms the following year. Were it possible it would be a good plan to have plants grown in the flower garden specially to produce flowers, and others in nursery quarters specially for layering. Very much of the success which attends layering is due to the time at which the work is done, and the kind of soil it is done in. Layers will root far more strongly when laid early. They may then be lifted and replanted in October, and to make an effect should always be in clumps, thus getting well established before the winter sets in. In light soil, too, they invariably root quicker than in clay, even though some sandy or light soil be added when layering is done. Of course, for all ordinary trade purposes of increase, layering of the growths is absolutely essential.—A. D.

—— "E. J." in his article *re* "Layering Carnations" (p. 425) refers to the variety Germania. This district is too cold, or the soil is unfavourable for it in the open air, but grown in pots under glass for early blooming, I can quite bear out "E. J.'s" estimate of it. Yearling plants potted firmly into large sixties will produce a single flowering spike during the spring, but at the same time four or five stubby lateral growths will be formed. The plants if afterwards potted on after blooming into 6-inch pots, will each carry four or five flowering growths, which bloom splendidly.—A. J.

—— I think that the remarks on the above subject by "E. J." (page 425) require modifying. It is no doubt possible to have a better show from plants two years old than from newly-planted layers. Yet to speak of doing away with layering seems to me to be going to the opposite extreme. I have seen two-year old plants flowering splendidly, but after the second year they get leggy, and unless skilfully tied into shape they have a very untidy look. It is not a bad practice to layer all the strongest growths after the second year, and regulate them so that they may remain and flower without taking them off the old stem, or if the old stool is cut away and rooted up, the space can be filled up with fresh soil and manure and will be ready for layering into again. I should, however, prefer keeping to the old practice of taking the layers up and keeping them in pots until February. Almost all plants become weaker with age, and Carnations are no exception. The only way to maintain a strong healthy stock is to propagate annually, and with Carnations there is no better method of propagation than layering. Seedlings are now extensively grown, and they make a fine show. A large percentage will come double, but the colours cannot be relied upon, and therefore the only way to have beds of distinct colours is to propagate either from selected seedlings or to keep to the most useful named sorts. With regard to Germania making a better show the second year I quite agree, for I find even in pots that older plants are preferable and will produce equally good blooms in much larger quantities. The way planting is done has a good deal to do with success in growing Carnations. Where the soil is loose and light it should be pressed firmly, always avoiding planting when the ground is in bad condition.—A.

The weather in West Herts.—The changes in temperature during the past week have been considerable. On the 5th inst. the shade temperature rose as high as 55° in the warmest part of the day; whereas only three days later it at no time exceeded 39°. During the night preceding the 5th the thermometer in the screen fell only to 49°—making this the warmest December night for seven years. Only two nights afterwards the same instrument fell to the freezing point, and on the two following nights the thermometer exposed on the lawn registered respectively 8° and 9° of frost. At 1 foot deep the temperature of the ground at the present time stands at 30°, or about the average reading for the month at that depth. A moderate quantity of rain has fallen during the week, and on the early morning of the 7th enough snow was deposited to nearly cover the ground. The wind was very high throughout the 5th; indeed, for the twelve hours ending 5 p.m. on that day the mean velocity amounted to 36 miles an hour. It was highest between 10 and 11 a.m., when a velocity of 38 miles was reached—direction, west. This is the strongest gale since March 24, when the record for a single hour reached 44 miles. Considering the time of year, the past week must be regarded as a sunny one, the average daily duration of clear sunshine amounting to about two hours. On the brightest day the sun shone for altogether four and a half hours.—E. M. *Berkhamsted.*

Books.

A HISTORY OF GARDENING IN ENGLAND.*

MISS AMHERST has done her work in this in a very conscientious and thorough manner, and we wish we could say the same of Mr. Quarritch's part of it. The "History of Gardening in England" begins with the Roman occupation. The Romans were skilled gardeners, and in a climate like that of Britain—which, according to Tacitus, was suitable for the cultivation of all vegetables and fruits except the Olive and the Vine. After the Romans left, Britain became the prey, in turn, of barbarian invaders, under whom gardening, with other peaceful arts, died out, and horticulture only revived with the spread of Christianity and the establishment of monasteries some centuries afterwards. The monks were great gardeners, their life within walls and the reverence which was accorded to the monastic life kept them free from the turmoil which distracted the peasantry without, while it enabled them to perfect the knowledge of gardening which they had obtained not only from books, but from their intercourse with the Continent. The existence of gardens or orchards in the eleventh and twelfth centuries, and a few of even earlier date, is only proved by reference to monastic records. In those days plants, not being vegetables for daily food, were chiefly grown for their medicinal virtues, and flowering plants were rarely cultivated for their beauty. Still, Roses, Lilies, Violets, Pæonies, Poppies and the like, having medicinal uses, would not be excluded from the garden. In the Middle Ages the use of flowers in the services of the church and for the adornment of altars, candles and shrines was very general. In the twelfth and succeeding centuries gardens were not only found within monastic precincts, but were also attached to many churches and chapels. Such gardens were under the care of the sacristan, but after the Reformation the decorating of churches was considered unlawful, and they fell into disuse or were appropriated to other purposes.

An important part of the monastic garden was the cultivation of Vines; bishops and nobles also had their vineyards, notably the Bishop of Ely's at Holborn and the Earl of Lincoln's hard by. They must have been sour Grapes, however, for we are told that from the latter vineyard about fifty gallons of verjuice were sold in one year (1295-6). In Smithfield a vineyard was planted by Geoffrey, Earl of Essex, about the same time. Passing from the monastic garden, there appear to have been gardens round Carlisle and outside the castle walls in the year 1173. In the reign of Edward I. there were a garden and vineyard at Westminster belonging to the king, and Henry II.'s garden at Woodstock, with the labyrinth which concealed the Bower, is known to most people in association with the tragic fate of fair Rosamond Clifford. From very early times such a labyrinth formed part of nearly every garden of importance. Windsor had its garden from the first, and a garden and orchard for profit for which the constable of Windsor was responsible, and there is an entry in the account of Walter Hungerford, Knight, Constable in 1419-22, in which he declines to be answerable for the fruits of the orchard and vineyard which were eaten by the ladies and others of the king's household. Besides the royal gardens at Westminster, Charing, and the Tower, there were other gardens round London, but chiefly, so far as there is any record, belonging to monastic houses. Large quantities of Pears, Apples, Nuts, and Cherries, as well as Grapes, were sold from the gardens in Holborn. Many of the Pears were of French origin, the Caloel, or Caillou, the Pesse, or Passe Pucelle, the St. Rule, probably named after St. Regolo, Bishop of Arles. There were also the Martin, the Sorell, the Chasteyns, and the Gold Knopes Pears, the prices varying from 4s., 2s., 3d., 10d. the 100.

THE FOURTEENTH AND FIFTEENTH CENTURIES

are remarkable for the growth of a class of farmers around whose farms and manors gardens and orchards were planted. The poorer classes would seem to have depended chiefly on vegetables for food. The beginning of this period was the time of the fearful plague known as the Black Death, and doubtless gardening suffered with other industries from the neglect into which product of human energy was allowed to fall In spite of this, however, by the end of the fourteenth century every small manor or farm could boast of a garden. Then came the check caused by the Wars of the Roses. In the Middle Ages the idea of a garden solely for beauty and pleasure was a secondary consideration, and the kitchen garden—as we now call it—was the only one attached to the house. About the beginning of the fourteenth century great attention was paid to grafting, and it was considered an essential part of a husbandman's education. Gardens then were usually square enclosures, bounded by walls of stone, brick or daub, or by thick hedges. There were generally two entrances, one giving access from the house and the other leading to the orchard or meadow. Miss Amherst devotes a chapter to early garden literature. Coming to Tudor times, we find freedom from internal wars favouring a new style of domestic architecture and a greater play of fancy in the garden. Trellis railings already in fashion remained in vogue for many years. Then, also, topiary work made its first appearance in England. This "art," it is said, was known to the Romans. In Tudor times, also, the mound, or "mount"—hitherto found only in monastic enclosures—became an important accessory of the garden. The mount served as a look-out over the surrounding country, and was often surmounted by an arbour, which was sometimes of considerable length, in the form of a gallery. Elizabeth of York, consort of Henry VII., had one of these "rooting-places"—as they were sometimes called—made for her in the little park of Windsor. At the beginning of the sixteenth century "knotted" flower beds were added to the straight beds in the garden; these knotted beds being laid out in complicated geometrical patterns, and by the year 1520 they were in common use. Contemporary writers mention the flowers that were cultivated in these "knottes," viz., Acanthus, Asphodel, Auricula, Bachelor's Buttons, Amaranthe or "Blites," Cornflowers or "Bottles," Cowslips, Daffodils, Daisies, "French broome," Gilliflowers (three varieties), Hollyhock, Iris, Jasmine, Lavender Lilies, Lilies of the Valley, Marigold, Narcissus (yellow and white), Pansies or Heartsease, Pæony, Periwinkle, Poppy, Primrose, Rocket, Roses, Rosemary, Snapdragon, Stock Gilliflowers, Sweet William, Wallflowers, Winter Cherry, Violet, and, besides, sweet smelling herbs such as Mint and Marjoram. To the number of cultivated fruits, the greatest addition was the Apricot, which probably was introduced by Henry the Eighth's gardener, Wolf, about 1524. Red Currants also made their first appearance about this time, at least they are never mentioned by the name in earlier records, and Gerard, so late as 1597, describes them as a very small kind of Gooseberry without "prickles," of a perfect red colour. The largest supply of fruit trees came

* "A History of Gardening in England." By the Hon. Alicia Amherst. Bernard Quarritch, 15, Piccadilly, W.

from his orchard at Tenham, in Kent. Under Elizabeth gardening, became greatly improved.

The Elizabethan Garden

was a blending of older fashions in English gardening with new ideas from France, Italy, and Holland. This period saw the beginning of the architect's garden: That is to say, the architect who designed the house designed the garden also. Yews were much employed for hedges for sheltered walks, and the terrace was introduced. The walks were "spacious and fair," and were of two kinds; those in the open part of the garden with beds geometrically arranged on either side, and sheltered walks between high-clipped hedges, and sometimes "shadowed over with vaulting or archhearbes," when they were known as "pleached alleys." At this period many new flowers were added to the gardens. The taste for statues and fountains and ornamental streams was brought in by foreign refugees from France and the low countries. The book contains an interesting chapter on kitchen gardens under Elizabeth and James I., also a chapter on Elizabethan garden literature. Coming to the time comprised in the reign of Charles I., the Commonwealth, and the Restoration we find the garden as we have seen it under Elizabeth, undergoing few changes until the last-named period, when many beautiful features, and new and rare flowers and fruits were added to the garden and orchard. An able gardener of this period was John Evelyn, who laid out several important gardens. He was a great advocate for clipped hedges. "Is there under heaven," he asks, "a more glorious and refreshing effect of the kind than an impregnable hedge 480 feet in length, 9 feet high and 5 feet in diameter, which I can show in my now ruined gardens at Sayes Court (thanks to the Czar of Muscovy), any time of year glittering with its armed and varnished leaves." The reference is to Peter the Great, who, during his residence at Sayes, near Deptford, amused himself by being wheeled about the garden in a wheelbarrow over gardens and through hedges. At this time great attention was paid to the cultivation of Tulips, Oranges, and many foreign tender plants. Conservatories became more general and orangeries were introduced. French gardeners were invited to come over and lay out the royal gardens, and they came, and to carry out their vast ideas, trees were planted in longer, larger and bolder avenues; there were terraces and wide paths, statues, fountains and cascades. Every garden also contained one or more sundials. Under William and Mary, the French and Dutch styles of gardening flourished, and it is now that we first hear of the parterre. The next chapter is devoted to the

Dawn of Landscape Gardening,

and the lively controversies it gave rise to between the advocates of the new and old styles. Then follow chapters on landscape gardening and gardening in the nineteenth century. A valuable feature of the work is a bibliography of works on English gardening. An alphabetical list of authors' works on gardening is also given, and there is a good index.

As regards the assumption that "landscape" is but a phase of taste like any passing fashion, we should like to say a few words. It has existed ever since the eyes of men were first opened to the beauty of the earth as now when from thousands of places in England beautiful landscape views are seen across the cultivated land. It exists in the wild mountain woodland and in the forest plain, apart altogether from man's efforts and as expressed in the parks of England from Alnwick to Richmond. It is in either case, we hope, too lovely a thing to pass away from the world so long as man has any eyes to see beauty.

But if all the works of man in landscape planting were swept away to-morrow there would still be beautiful landscape on vast areas in all countries. There are ten thousand grassy lawns among the mountain Pines of Switzerland, where beautiful things are seen in the landscape, as there are on the mountains of California and Cashmere, and indeed the many other woody mountain lands of the world. Writers like Pope and Addison, who expressed so wittily their objection to the formal style of gardening, were more right than they perhaps knew, because they had not gardening knowledge enough to know how unnecessary the stupid formality they laughed at was to the working of a garden. Apart from the disposition of ground and landscape, there is the question of the arrangement of all the beautiful things of earth—flower, shrub, or tree in right or wrong ways, which is really the same question. Here there were always lessons to be learned which the poet or the clear-eyed observer could not fail to see. One cannot draw any strict line between lovely colonies of Bird's-eye Primrose in the bogs of Westmorland, the little families of Gentian by the alpine streams, the groups of Venetian Sumach cropping out of the alpine rocks, the groves of May on hill and mountain, and the stately groves of the forest plain. It is a question of degree. In planting and carrying out in the garden the same things we are simply learning a lesson direct from nature, and in no way carrying out a mere fashion or fancy.

The expression of those ideas seems to some people to imply that one must allow nettles to come into the windows, and the garden generally to be a wilderness. But having plants in natural forms does not in the least prevent one from making a straight walk along a straight wall, or from having the necessary wall protection for one's house. To be possessed of the natural and artistic idea does not prevent us from using common sense in the disposition of the ground around a house.

Many people think that once given a garden wall all within it must be stiff, but that is an error. The common flat way of arranging is not in any sense the Italian or the beautiful way in England or in other countries, as we see in various countries where the presence of a wall does not prevent things being grown naturally and beautifully any more than the walls of a room in Japan prevent the Japanese from preserving the natural lines of flowers, or a European lady from arranging her flowers in simple natural ways. There is a difference between the great teacher Nature and the chinoiseries of decorators. In those days the gardener was the cypher who carried out the ideas of the architect, armed with the shears and occasionally with a scythe and a high ladder, when the poor clipped trees extended for miles as at Versailles; or sometimes he had a pot of paint to colour beds of bricks and stones (as in our own time at Kensington). The landscape art was not invented by Kent or Brown or any of those old writers; it was the simple aspiration after truth and nature. As Addison wrote (p. 238): "I do not know whether I am singular in my opinion, but, for my own part, I would rather look upon a tree in all its luxuriancy and diffusion of boughs and branches, than when it is cut and trimmed into a mathematical figure; and cannot but fancy that an orchard in flower looks infinitely more delightful than all the little labyrinths of the most finished parterre." This view is not merely a question of taste, but absolutely true, as anybody who has paid any attention to Art knows.

Having disposed of the garden from the historical point of view—and there is no doubt that the authoress has done her best with the original documents and sources of information at her disposal, we cannot help saying that the publisher has not, we think, done his work so well. A publisher who has passed so many beautiful books through his hands as Mr. Quarritch must know that these "processes" in many cases give no idea of the things they represent, and that they are better omitted if cuts cannot be reproduced better than, for instance, the one of Burghley (p. 266) and, indeed, many other cuts in the book, which are not right either in tone or distance, or in clearness. The process also means the use of heavy-clayed and glazed paper, which is so very inferior to the old paper which was so light in the hand. These heavy-clayed papers even interfere with the binding, as the books printed on them cannot be bound in the same secure way as in the days of real paper.

Societies and Exhibitions.

ROYAL HORTICULTURAL SOCIETY.

December 10.

Taking into consideration the season of the year, this gathering was a remarkably good one, although in quantity there was again a falling off The greater part of the labours of the day fell upon the Orchid committee, before which many noteworthy exhibits were presented. On this occasion Cypripediums predominated, there being some of the rarest kinds, both species and forms of species, as well as hybrids, to be seen. Amongst these were several of the very choicest, as C. insigne Sanderianum and C. insigne Sanderæ, two of the gems of this old species. The work of the fruit committee was comparatively light; there were a few good Apples shown, but on this occasion the honours, both in size and quality, belonged to the Onions, of which some fine examples came from two of the best known growers. The floral committee had but little more to do than the fruit committee, Chrysanthemums being the strongest feature, of which there was a most notable exhibit by Mr. Briscoe-Ironside, of a rich yellow variety, tastefully and effectively arranged in a vase of terra-cotta colour. Some first-rate bush plants came from another source, and also a few fine late blooms of the Japanese section.

Orchid Committee.

A first-class certificate was awarded to—

Dendrobium Treacherianum.—A most distinct species, which at the first glance would not seem to have any or but little affinity to this genus. In its growth it resembles more a Maxillaria than a Dendrobium, the bulbs being short and stout, surmounted with a pair of leaves of great substance, but which, singular to say, appear to be disposed to partially die off. The flowers are produced from erect spikes which issue from the apex of the bulbs, each spike bearing from six to ten flowers. In colour these are of a dark vinous crimson at the base of the lip, shading off to rose at the extremities, the sepals and petals being pale rose, toning down to almost white at the tips. The plant bore three spikes of fine blooms. A noteworthy fact concerning this Dendrobe is that it was discovered by Mr. Peter Veitch and Mr. F. W. Burbidge in their Bornean expedition nearly twenty years ago. From Sir Trevor Lawrence's collection.

Awards of merit were made to the following:—

Masdevallia macrura.—A most lovely species, both distinct and singular; the flowers each measured 10 inches from tip to tip of the sepals, being in colouring of a rich orange tint, shading off towards the extremities of the long tail-like sepals to a pale gold colour, the surface of the inner portion of the flower being profusely spotted with dark maroon spots. From Sir Trevor Lawrence.

Calanthe Harrissi (C. vestita Turneri × C. Veitchi).—A charming and singularly unique hybrid, having the bulbs of the former and the flowers, so to speak, as regards form, of the latter parent, but the colour pure white, very chaste, with the faintest possible suspicion of pale rose suffusion traceable here and there; the spike is erect, and indicates greater vigour with age. From Messrs. J. Veitch and Sons, Chelsea.

Lælio-Cattleya Lady Rothschild (Cattleya Warscewiczi × Lælia Perrini).—A lovely hybrid, the sepals and petals fully 6 inches across, in colour a soft shade of rosy mauve, a delicate and beautiful tint, the lip at its base having a broad blotch of dark crimson-purple and darker veins, next this was a broad band of pale lemon-yellow,

which stood forth in decided contrast to the foregoing colour. From Messrs. J. Veitch and Sons.

Oncidium tigrinum var.—A well-marked form of this Oncid, with the labellum broader and richer in colour than usual (a deep sulphur shade), the sepals and petals barred with greenish yellow on a bright chocolate ground. From Mr. De B. Crawshay, Rosefield, Sevenoaks.

Cypripedium Ashtoni (C. ciliolare superbum × C. selligerum majus).—A bold and striking hybrid, with mottled foliage, and a tall spike of two flowers; the lip partook greatly of C. ciliolare in form, but was darker in colour, the broad petals being drooping, as in its other parent, but of a dark vinous-purple shade, with darker spots; the dorsal sepal is also of considerable breadth, with dark purplish veins on a light ground, and in shape somewhat angular. From Messrs. W. Lewis and Co., Southgate.

Botanical certificates were awarded to the three following Orchids, all from Sir Trevor Lawrence, viz., Angræcum pertusum, which in growth resembles the dwarfer Aerides or Vandas, with long slender spikes of minute white flowers; Mormodes Lawrenceanum, a distinct, if not showy species, flowers pale greenish yellow with darker veins; Masdevallia pachyura, a small and dwarf species, the flowers of a dark bronzy yellow with golden tips.

Baron Schrœder, The Dell, Egham, sent a very choice and varied selection of Cypripediums (cut blooms), all of which were remarkably fine examples and of excellent colour. These consisted of C. insigne Sanderianum and C. insigne Sanderæ (two fine flowers), C. villosum superbum, C. Chamberlainianum (fine in colour), C. Niobe (extra strong), C. Stonei, C. T. B. Haywood (a fine hybrid), C. southgatense, C. superciliolire, C. Spicerianum, C. Leeanum princeps and C. Leeanum superbum (both fine), C. Schrœderianum, C. cardinale, C. Pitcherianum (Williams' var.), C. Galatea, C. Arthurianum, C. Charlesworthi, C. Harrisianum superbum and C. Dauthieri albino (very distinct). To this most interesting exhibit a silver Banksian medal was awarded.

Messrs. Veitch and Sons, Royal Exotic Nursery, Chelsea, contributed an exceedingly choice group, which comprised a beautiful example of Lælio-Cattleya Pallas (Lælia crispa × Cattleya Dowiana), a hybrid which, as it continues to gain vigour, shows a corresponding increase in the rich colouring of the flowers, notably in the lip, which takes after C. Dowiana, with the fringe of L. crispa. Cypripedium insigne Sanderæ, of which two sturdy plants were shown, was in excellent character. C. Niobe, a charming hybrid, was also included along with C. Œnone (C. Sallieri and C. Sallieri nigro-maculatum), the spotting very dark and distinct. Cymbidium Traceyanum, with a bold spike of richly-coloured flowers, and Dendrobium subclausum (to which a botanical certificate was awarded at the last meeting) were also included (silver Flora medal).

Messrs. F. Sander and Co., St. Albans, showed another excellent group, in which the following choice hybrid Calanthes were very conspicuous, viz., C. Bryan, C. Wm. Murray and C. Victoria Regina (soft rose), each of which was grouped together in a basket, thus adding to the effect. Of Cypripediums there were C. Pryorianum, with some affinity to C. Lathamianum, but darker, showing also C. villosum farther removed. The "Oakwood" variety of C. Calypso, another good hybrid, as well as the extra-fine forms of C. Leeanum, as seen in "reticulatum," a noble variety and quite distinct, with its massive pouch and the bright green colouration at the base of the dorsal sepal and the petals; C. James Hamilton, with its fine dorsal sepal; Sander's var., another good form of this prolific hybrid; C. nitens (Sander's var.); C. Donatianum, with a large flower; C. Uhleinianum, C. Alcides and C. Clement Moore (C. Dauthieri × C. Leeanum), a noteworthy hybrid, as well as C. Spicero-niveum, which in its form showed its affinity to C. niveum, but the colour was a shade of rose-pink, were also shown. Of Odontoglots there was O. Schrœderianum, which improves on acquaintance, the present example bearing two sturdy spikes from the same bulb. O. nevadense and O. Wilckeanum were both shown well, likewise O. aspersum. Of botanical curiosities, a note should be made of Restrepia attenifera and Helcia sanguinolenta (silver Banksian medal).

From Mr. Bennett-Poë, Holmwood, Cheshunt, came a most suggestive and tasteful arrangement of Calanthe Veitchi, extra fine spikes, and of deep rose colour, and of C. vestita rosea, the spikes of which were also of great vigour. Both of these vars. were arranged together with good effect. Lælia autumnalis, fine in colour, and Vanda cœrulea, with two fine spikes of an intensely deep cœrulean blue, came also from this source (silver Banksian medal).

Sir Trevor Lawrence showed Lælia rubescens, a little gem, and from Mr. H. Tate, Junr., Allerton Beeches, Liverpool, came Cypripedium insigne, there being two distinct forms in the one pot, the more noteworthy of these was that in which the lower sepal was quite a counterpart of the dorsal one; two flowers bore this character, this being the second year in which this possible sport had been observed. Messrs. B. S. Williams and Son, Upper Holloway, showed several Cypripediums, including C. Sallieri, with extra fine blossoms; C. insigne Maulei, C. Leeanum superbum, in which the dorsal sepal was of extra size and great purity; C. Pitcherianum (Williams' var.), recognised as an extra fine form and a fitting companion to Cypripedium Harrisianum superbum. Mr. W. C. Walker, Percy Lodge, Winchmore Hill, showed Cypripedium Charlesworthi, with one very large flower, the dorsal sepal of which was even larger than usual; on the same spike was a secondary, but malformed flower, in which the sepals and petals were strangely commingled. Oncidium Gravesianum without the usual bars of yellow, thus making it distinct, and Lælia rubescens came also from this source. Messrs. H. Low and Co., Upper Clapton, showed an attractive group that comprised a beautiful example of Cymbidium Mastersianum and two others of C. giganteum in the way of C. Traceyanum, but paler in colour. Odontoglossum crispum and O. Roezli were both staged here; also Cypripedium Niobe, C. Charlesworthi, C. insigne (vars.), and C. Leeanum (vars.).

From Mr. Thos. Statter, Stand Hall, Manchester, came on this occasion Lælia elegans nobilis, bearing four flowers on the one spike, these being distinct in colour, a rich shade of dark copper, suffused with purple, and the lip brighter than usual. L. Tresideriana, a pretty hybrid of dwarf growth, as well as some very fine forms of Cypripediums, comprising C. Leeanum giganteum grandiflorum, the appendices to the specific name of which must speak for the variety, a very fine one were included here. C. Leeanum superbum (Stand Hall var.) was also staged, the pure white of the dorsal sepal being a distinctive feature here. Other kinds comprised C. Ariadne, C. Niobe, C. plumosum, C. Lucienianum, and C. Rufus. From Mr. Shoreland Ball, Earlscliffe, Bowden, Cheshire, came Cypripedium insigne Sanderæ, an extra fine flower, of rich translucid colour, C. insigne Ballianum, in which the spotting of the upper sepal extends through the pure white margin; and Cattleya labiata alba, of fine size and purity, having the characteristic blotch on the lip.

Floral Committee.

An award of merit was given to—

Chrysanthemum Stresa.—A late-flowering decorative kind that promises well for cutting at Christmas time. The flowers shown had been brought forward in heat in order to show it at this meeting. It belongs to the Japanese section, the flowers of a clear soft yellow colour. It was shown by Mr. H. Briscoe-Ironside, Burgess Hill, Sussex.

The miscellaneous contributions were very few. Mr. J. Lyne, gardener to Mr. H. F. Fierke, Foxbury, Chislehurst, was awarded a silver Banksian medal for a group of dwarf, well-flowered plants of Chrysanthemum Jeanette Sheehan. This is a useful late-flowering kind, which can be had in bloom up till February. An award of merit was granted it at the January meeting of the R.H.S. this year. It is a sport from Princess Blanche, and its flowers are deep buff-yellow with bronzy centre. In habit, colour, and freedom there is much to recommend it. Mr. R. Owen, Maidenhead, received a silver Banksian medal for cut blooms of Chrysanthemums, show and decorative varieties, the exhibit comprising a number of unnamed seedlings, several of them distinctly promising, but they cannot be noted when shown under numbers. Mrs. C. E. Shea as seen in this exhibit tends to confirm the opinion that it has been very much over-rated. Messrs. H. Cannell and Sons showed a bunch of a rich yellow incurved Japanese Chrysanthemum named Ashanti, also several bunches of Cannas, notably Queen Charlotte and Alphonse Bouvier, and Chinese Primulas in pots. Sir Trevor Lawrence was awarded a silver Banksian medal for a vase of Anthurium spathes, arranged with their own leafage to show the value of this class of plants for winter decoration. A pan of Primula floribunda in profuse blossom came from the same exhibitor. Mr. C. Herrin, Dropmore Gardens, showed three well grown and flowered plants of the shrubby Oxalis Ortgiesi, a species not often seen. Mr. J. T. Bennett-Poë, Holmwood, Cheshunt, showed another fine plant of Begonia Frœbeli incomparabilis carrying a number of brilliant flowers.

Fruit Committee.

For the time of year the exhibits were fairly numerous, and vegetables (Onions especially) were good. Most of the members of this committee were present, to express their good wishes to the secretary, this being his last official appearance at Westminster.

An award of merit was given to

Victoria Borecole, a very fine type of Scotch Kale from Messrs. Dobbie, Rothesay. It is a selection of their Dwarf Green Borecole, a close-growing kind, and very hardy. The committee desired it to be sent to Chiswick for trial.

Mr. Pope, Highclere Castle, Newbury, sent thirty dishes of Onions, all good, half being sown outside, the other portion having been raised under glass. The heaviest were Ailsa Craig, Improved Spanish, Rousham Park, Improved Wroxton, Anglo-Spanish, Veitch's Main Crop, Southampton Champion, Banbury, Sutton's Al Crimson Globe, Southport Globe, Lord Keeper and Improved Pinesfield. The same varieties were staged in the smaller bulbs grown under ordinary culture, but equally good. A silver Knightian medal was awarded. Messrs. Cannell and Sons, Swanley, staged a large collection of vegetables, very fine Onions in twenty lots, a few Champion Leeks and large Savoy Cabbages, with green curled Scotch Kales. The Onions were of good shape, heavy and sound, the best being Royal Jubilee, Tollingstone Park, Concord, Sandy Prize, Veitch's Main Crop, Neill's Advancer and Cocoanut. Beet was staged in eight varieties, but some kinds—notably Dell's Crimson—were much too coarse. Silver Banksian medal. Messrs. Dobbie staged a group of their Kales, these being noticeable for the beautiful curled leaves and compact growth. Messrs. B. S. Williams and Son sent a new seedling Tomato—Warden Park Favourite—but too much like the Old Red. It was asked to be sent for trial. Fruits of the tree Tomato (Cyphomandra betacea) were sent by Messrs. Curtis Sandford and Co., Torquay. Messrs. Laxton, Bedford, sent a new Apple, Bedford Scarlet, of nice appearance, but too ripe. Mr. Empson, Ampthill House Gardens, sent some Apples, which the committee considered good examples of Pearson's Plate and Fearn's Pippin. Mr. Easton, Nostell Priory, Wakefield, sent three dishes of cooking Apples, fair samples of Lane's Prince Albert, The Queen (rather small), and Emperor Alexander. Messrs. Jarman, Chard, sent a new Apple, Crimson King, stated to be a late variety, but the fruits sent were past their best. It promises to be a good market fruit. Trees

were also sent to show growth, which was remarkably strong. Mr. Ross, Welford Park Gardens, Newbury, sent a new seedling dessert Apple of merit, a pale coloured fruit of brisk flavour, and a good keeper. This will be useful as a good late fruit. Mr. Miller, Ruxley Lodge Gardens, Esher, sent a large collection of Apples and Pears.

At the close of the meeting, Dr. Hogg rose and proposed that—

This committee desires to record its high sense of the valuable services which Mr. Barron has rendered to it during his long occupation of the position of secretary, from which he is now retiring, and to congratulate him on the distinction of having been placed by the council on the roll of honorary Fellows of the Royal Horticultural Society. The committee will also heartily welcome him to a seat at this table, and expresses an earnest hope that he may long enjoy health and happiness, and find many opportunities for continuing to render distinguished service to horticulture and to the society.

As the oldest member, Dr. Hogg testified to Mr. Barron's great abilities, his love of the work, and the way he had done his duty in every way. Mr. Smith, Mentmore, seconded the motion. Mr. Barron, in reply, thanked those present, and feelingly mentioned the interest he had taken in the society, and his regret at leaving Chiswick where he had been for thirty-eight years. Thirty years ago that day he was appointed secretary of the fruit committee. Mr. Wythes, Syon, proposed a hearty vote of thanks to the chairman, this being the last meeting of the year. This was seconded by Mr. Balderson, Hemel Hempstead.

NATIONAL CHRYSANTHEMUM SOCIETY.

ON Monday evening last, a meeting of the general committee was held at Anderton's Hotel, Fleet Street, when Mr. B. Wynne presided. The minutes of the previous meeting having been read and confirmed, and some routine business arising out of the correspondence having been disposed of, it was announced that the prize money awarded at the recent December show amounted to the sum of £51. 4s. 6d. exclusive of medals. The awards made by the arbitration committee at the same show were confirmed. On the motion of Mr. Geo. Gordon, it was resolved that in future all classes in which Japanese Chrysanthemums are required to be shown on boards, that the boards for twelve blooms be of the following dimensions, 28 inches by 21 inches, height in front 3½ inches, height at back 7 inches, holes to be 7 inches apart from centre to centre.

The annual general meeting of the society will be held on Monday, February 24 next. In 1896 the following exhibitions will be held:—Early Chrysanthemums, Dahlias, &c., on September 9, 10 and 11. Early Chrysanthemums, October 6, 7 and 8. Jubilee show, November 3, 4, 5 and 6. Late Chrysanthemums, December 1, 2 and 3. New members were elected bringing up the total for the year to 153. The following societies were admitted in affiliation, St. Botolph (Colchester), Amateur Chrysanthemum Society; the Newton Abbott Chrysanthemum Society, and the East of Fife Chrysanthemum Society.

The floral committee of this society held the last of its meetings for the present season on Wednesday last at the Royal Aquarium, when Mr. T. Bevan presided.

Owing to the lateness of the date there were only a few exhibitors, the principal collection coming from Mr. R. Owen, of Maidenhead, who was awarded a small silver medal for a collection of cut blooms on boards and in bottles comprising many novelties of recent introduction.

First-class certificates were awarded to

MRS. R. W. E. MURRAY.—A very fine globular Japanese variety, deeply built, and very compact. The florets are narrow and intermingling, and the variety was presented in very fine form by Mr. R. W. E. Murray, of Blackford House, Edinburgh.

JEANNETTE SHEAHAN.—As a decorative and market variety this yellow buff sport from Princesse Blanche will no doubt be useful. Shown by Mr. D. Sheahan.

Goldfield, a loose decorative Japanese incurved, of deep golden yellow, was requested to be shown again. Among other novelties Mrs. C. E. Shea, white, shaded yellow; H. W. Rieman, a golden yellow Japanese incurved, of American origin, and Marie Valleau, another from the same source, a Japanese incurved, were attractive. Mention might also be made of Exposition d'Arras, Bellem, and Mme. Eugene Mercier.

NOTES OF THE WEEK.

Pear President Barabe.—I have sent you today some fruits of this new late Pear. I think you will find it of first-rate quality. Pears grown in 1894 ripened at the end of January, 1895. The first time this Pear fruited with me was in 1894. It is a delightful surprise to find a Pear of such excellence ripe and in good condition at the end of January. The flesh is melting, very sweet and juicy, somewhat resembling Winter Nelis. I should think after an average normal season it would be ripe at Christmas.—WM. ALLAN, *Gunton Park, Norwich.*

*** A true Pear, good in form and good in flavour even compared with the excellent Winter Nelis. We say a true Pear to distinguish it from the kinds that waste precious space in our gardens, such as Vicar of Winkfield, Beurré Clairgeau, Beurré Rance, &c.—ED.

Grevillea Thelemanniana.—It is a good many years since the Cape and Australian plants occupied the first place in public favour among indoor plants; yet there are still a few left behind, survivals of the fittest no doubt, and of these this Grevillea is one. It is a native of West Australia and was introduced in 1838. Both as a flowering and as a foliage plant it has recommendations. The leaves are bright green and are cut up into numerous linear segments. The flowers, although produced more or less throughout the year are most abundant from October on throughout the winter. They are borne in dense, pendent clusters, terminating the branches, and are of a deep rosy red at the base, where the tube of the flower is inflated, the four petals being however, of a yellowish shade. The style is conspicuous with its long, red stalk and orange-coloured stigma. When young, this Grevillea should be stopped occasionally to secure a bushy habit; it strikes readily from cuttings.

Jasminum nudiflorum.—How beautiful this Jessamine is as seen in full bloom covering a goodly space of wall at this dull season of the year! I do not mean when each shoot is stiffly tied or nailed with mathematical precision, but rather as seen when allowed comparative freedom of growth—the main stems fastened, and the young flowering shoots dangling and swaying in the breeze. I admit that during the summer it is anything but an object of beauty—far from deserving a wall at that season—but to obviate this dulness I allow Tropæolum speciosum to ramble and festoon itself over it, so that almost as soon as the spring pruning is done, the Jessamine is clothed with soft and delicate green leaves, and subsequently with strings of glowing bloom, intermixed and followed by a crop of lovely blue berries, and ere the sere leaves have dropped the Jasminum again bursts out into bloom. I would strongly recommend those who may not have as yet associated these two plants in this way—or something similar—to do so on walls or in the open—or both—and they will not regret it.—J. R.

The yellow Scotch Pine (Pinus sylvestris aurea).—The number of Pines with variegated or coloured foliage is small, and, as a rule, of no particular value. The yellow Scotch Pine is, however, an exception, and is distinctly useful for the colour it gives in winter. It is curious that it is at this season only that its foliage is noticeably different in hue from that of the ordinary Scotch Pine, and when the leaves of most evergreens are putting on a deeper autumnal green this Pine is only beginning to assume its livelier dress. The golden colour is deep and rich, and, unlike the colour varieties of many hardy plants, does not in any way suggest ill-health. Compared in habit with the common Scotch Pine, it is dwarfer and more compact. It is, therefore, better adapted for the garden than the park. The same may be said of the varieties pygmæa and nana, both rounded, pretty bushes a few feet high; they do not differ in colour of leaf from the ordinary form. All three are propagated by grafting on seedlings of the Scotch Pine.—B.

Thyrsacanthus rutilans.—This beautiful winter-flowering plant is seldom seen in good condition now-a-days. It used to be largely grown and much prized for its brightly coloured flowers at this dull season of the year, making the stove and intermediate houses look gay in conjunction with Poinsettias, Aphelandras, &c. Nothing can be prettier or more graceful in its way than this plant when well grown and abundantly flowered. Plants about a foot high grown in 5-inch pots and with nine to twelve scarlet panicles 18 inches long, form splendid subjects for vases and for dinner table decoration. It also forms a very pretty picture in the intermediate house just now, the plants being slightly elevated and the interstices filled in with Eulalia japonica, which associates well with it. Plants should be raised from cuttings rooted in heat in spring, grown on until put into 5 inch and 6-inch pots by the middle of June. They should be placed in a cold frame during the summer and early autumn months, and given all the sunlight possible, with abundance of air to thoroughly ripen the wood. The plants should be put into an intermediate house in the beginning of October, when they will immediately show for flower. Thyrsacanthus rutilans is a native of Central America, and was introduced in 1851.—J. G.

Proposed Palm house at Battersea Park.—The Parks and Open Spaces Committee recommended: "That, subject to an estimate being submitted to the Council by the Finance Committee as required by the statute, the Council do authorise an expenditure of £2000 for the erection of a Palm house at Battersea Park, in accordance with the design prepared by the architect; and that inasmuch as the chairman of the Works Committee is of opinion that the work is one which the Works Department is not in a position to execute with special advantage to the Council, the committee be authorised to invite tenders." Mr. Beachcroft moved, as an amendment, "That the Council, having regard to the increasing demands upon it in regard to open spaces both on capital and maintenance accounts, is not prepared to undertake the cost of erecting a Palm house at Battersea Park." Colonel Rotton seconded the amendment, which was carried by 70 votes to 28.

Gardeners' Royal Benevolent Institution.—We are requested to state that the committee of the Gardeners' Royal Benevolent Institution have received the sum of £257 3s. 5d., being a proportionate amount of the fund raised to perpetuate the memory of the late Mr. Wm. Thomson, of Clovenfords, to be invested and known henceforth as the "Wm. Thomson Memorial Fund."

Etudiant.—The Revue Horticole. Published at 26, Rue Jacob, Paris.

Names of plants.—*M. Lorenzen.*—1, Lastrea Sieboldi, a native of Japan; 2, Cyrtomium caryotideum, native of Japan, China, Himalayas, Neilgherries, Kaffraria, &c.——*F. Allen.*—Probably Amaryllis formosissima, or it may be a Vallotta.

Names of fruit.—*C. Quin.*—1, Pear Marie Louise; 2, rotten; 3, Glou Morceau; 4, Beurré d'Aremberg.——*Ernest Shore.*—1, Newton Wonder; 2, Golden Noble; 3, Margil; 4, Old Nonpareil; 5, Marie Louise d'Uccle; 6, Beurré Bachelier.——*J. Crook.*—Lady Henniker.——*J. E. Davies.*—1, Apple King of the Pippins 2, Pear Beurré d'Aremberg; 3; Pear Glou Morceau. *O. R.*—Too rotten.

No. 1257. SATURDAY, December 21, 1895. Vol. XLVIII.

"This is an Art
Which does mend Nature: change it rather; but
THE ART ITSELF IS NATURE."—*Shakespeare.*

ROSE GARDEN.

PRUNING LATE-PLANTED ROSES.

A GOOD many Roses are planted after the new year, and it is an important question whether they should be pruned before or after planting. It is my opinion that the pruning should be done first, as the sooner this is done after the close of the old year the better the plants will flower. Plants that are pruned at the beginning of January, and not planted until the end of February or March, will have time to recover from the operation. There is no fear of those planted late, starting into growth early enough for the frost to injure them, because the check to the roots is sufficient to prevent an early growth, but there is a risk of the roots receiving a check when the branches are hard cut back just as the warmer weather induces greater activity in the roots. Plants pruned before being planted grow away more vigorously than those that have to be planted and pruned with but a short interval between. I think it better to prune but very moderately in the case of strong growers, and in the case of weak ones not at all. I have had very satisfactory results the first year from standards that have not been pruned at all both in the first and second lot of flowers, and I have not experienced any difficulty afterwards in getting the head into shape. With regard to late planting, I would prefer not to plant from the middle of December till the middle of February. Of course, a good deal depends on the kind of weather during that time, but, taking the seasons generally, Roses are better for not being disturbed during that time. Rather than plant during that time I would prefer to get the plants home, and after pruning them to lay them carefully in on a warm border, covering the roots with leaf soil or fine sandy earth. Treated in this way, the plants may be lifted at the end of February with safety, and if carefully planted will flower as early and as freely as those that are planted in the autumn and pruned in early spring. There is no doubt that a good many Roses, whether established or recently planted, are pruned too early. As a consequence the newly-made growth suffers both from cold wind and attacks of insect pests. As locality and position vary considerably, it is not easy to fix a date when the pruning may generally be done with safety. The third week in March is quite early enough in the west of England, and in colder parts of the country a week or ten days later will be found suitable. J. C. CLARKE.

ROSE CATHERINE MERMET.

I DO not know how this Rose is grown in Paris, but I do know that there is no more suitable or beautiful Rose for pot culture, or for that matter for planting out in small greenhouses when there is no room for more vigorous growing varieties. Near to where I write there is an amateur grower who has only room enough for some half a dozen pot Roses, and his selection is confined entirely to Catherine Mermet. From these and from another plant growing in a narrow border in the greenhouse he secures a supply of Roses all the winter. The greenhouse of course is a warm one, the temperature in cold weather being 50°. I may mention the pot Roses get special treatment. Early in the summer they are pruned rather hard and given larger pots if they want them. After this they have the shelter of a cold frame to enable the roots to get established in the new soil. After two or three weeks of this treatment they are lifted out and stood along the back of the frame, which is just high enough to prevent the sun reaching the pots. Yet most of the stem and branches have the benefit of full exposure to the sun. The excellent condition of the plants which I have seen so treated shows that the roots appreciate the cool position they occupy. I have never seen this Rose making such satisfactory growth and such clean and handsome foliage as in the case under notice. All the flower-buds formed up to the middle of September are removed, this, of course, helping the plants to get strong and well furnished with growth that will produce flowers during the winter. I am satisfied from my own practice and what I have seen in a few other places that cultivators generally keep their plants of Tea Roses in pots too small by hard pruning and confining the roots in too small pots. When such varieties as the one here referred to and Isabella Sprunt, Dr. Grill, Adam, Alba rosea, and Marie Van Houtte are grown in 12-inch or 14-inch pots, it is surprising what a number of flowers they will produce if given a suitable temperature during the winter and spring months. What such plants want is a good rest during the summer. They must be removed at the beginning of June to a warm and sheltered position in the open air and the pots plunged in coal ashes, or else some long dry litter packed closely between them. W. A. Richardson is another Rose that responds admirably to this kind of treatment if care is taken to preserve the young shoots that spring up from the bottom, removing some of the oldest growths to make room for them. The newly-made shoots produce the largest and best-formed flowers, and a few plants of these in bloom at the end of February are something to see and remember. J. C. CLARKE.

CHRYSANTHEMUMS.

NEW ENGLISH CHRYSANTHEMUMS.

ALTHOUGH so many of the novelties of each season are either Continental or American seedlings, we have this year had some splendid contributions from our own raisers. Mr. C. E. Shea, Mr. Briscoe-Ironside, Mr. Weeks, Mr. W. Seward and the ordinary trade growers are proving their capacity, so far as climatic conditions will permit, to compete with all comers. Indeed, some of the triumphs of their cultural skill as exhibited this season prove that their knowledge of the requirements of the English exhibitor has served them in excellent stead in the interesting work of seedling production. Among the choicest novelties of purely English origin, the following have been shown in fine form this season: Miss Alice Love, a white Japanese; Emily Silsbury, also a white Japanese; Lady Randolph, a fine purple-amaranth variety of the same section; Lady Esther Smith, a white Japanese incurved; Mrs. Charles Blick, another pure white Japanese; D. B. Crane, a deep golden amber incurved; Edith Tabor, a grand yellow Japanese; John Seward, a Japanese, colour canary-yellow; Dorothy Seward, pale crimson, tinted carmine, with reverse of gold, also a Japanese; Mrs. J. Shrimpton, orange-yellow, streaked crimson, also of Japanese form; Lady Byron, a pure white Japanese; Piccinino, a pretty pompon, colour rosy purple, with silvery reverse; Dorothy Gibson, a reflexed variety of golden yellow; Kentish White, a Japanese incurved, the name of which indicates its colour; Duchess of Fife, another white variety; Maggie Shea, a canary-yellow Japanese; Mrs. B.-Ironside, salmon-blush, an incurved Japanese of good form; Mrs. H. Weeks, the largest white Japanese shown as yet; Arona, reddish crimson, a Japanese; Mrs. Hume Long, very large, a rosy amaranth Japanese incurved; Mrs. Hermann Kloss, another Japanese of great size, colour golden bronze; Wm. Slogrove, a golden yellow Japanese, incurving in form; Olive Oclee, golden bronze, a Japanese incurved, but heavier in build than the preceding, and Miss Phyllis Fowler, a pale yellow incurved.

These are but a selection from a vast number that have come under my notice during the season of 1895. Probably many others not mentioned may ultimately prove to be equally good, but the difficulty of making a selection of the best novelties the first season is always attended with some uncertainty. Enough, however, has been said to show that our growers, both amateur and professional, are deeply interested in the work.

C. H.-P.

Striking Chrysanthemums.—There can be no doubt that much of the success or otherwise in growing Chrysanthemums either of the show or decorative section depends on the preparatory treatment the old stools receive previous to the cuttings being taken off. How often are cuttings taken from plants that have been huddled together as thickly as Beans in a field, becoming thereby weak and sickly. Of course, these improve when brought to the light and air, but they never can acquire that sturdy and vigorous constitution which is the only guarantee for a healthy plant and high quality blooms. Where frames can be spared the best plan is to select several stools of each sort from plants that have not been crowded together, and to place them therein in December. Here, with judicious covering in sharp weather and abundance of air on fine days, the growth will be all that can be desired. Springing up strong from the base of the stools, many of them will have a good percentage of roots to start with, and good plants will soon be formed. Although January and February are soon enough for taking cuttings for large blooms or ordinary bush plants, the end of November, or at the latest the first week in December, is the correct date for taking them for the production of fine specimen plants. Taken then, the plants are ready to pot into 6-inch pots by the middle of January, and thus have a long season of growth.—J. C.

Chrysanthemum L. Canning.—Though this is given in the catalogue of the National Chrysanthemum Society as a mid-season variety, its great value lies in its late blooming. Its merits in this respect were well shown in a large group consisting of this variety alone, which was exhibited at the meeting held at the Aquarium on December 3. The plants were dwarf, yet each carried a number of good blooms, which at this season of the year (and later still) are invaluable for cutting. Its value in this respect is further enhanced by the fact that though the flowers are large, they are by no means lumpy, and do not become tinged with pink as the blooms of some varieties do towards the end of the season. It is an American-raised variety and was distributed in 1888, so that it is, as Chrysanthemums go, by no means a novelty. A good companion to this appears likely to be Golden Dart, to which an award of merit was granted at a recent meeting of the Horticultural Society. It was also given a first-class certificate by the floral committee of the National Chrysanthemum Society. It appears to be a very valuable variety for cutting, the flowers standing up well on good stout stems.—T.

New American Chrysanthemums.—On pages 442 and 443 Mr. C. Harman-Payne gives a list of these, remarking that the incurved Japanese section seems likely to receive large additions from this list. Apparently Mr. Payne is quoting from the American catalogues, for, having grown nearly the whole of those mentioned, I regret to say that although there are a few very promising varieties among the 1895 novelties, the majority are not worth growing for further trial. Correctly speaking, they are not all American varieties, several being introductions from Japan *via* California. The catalogue descriptions are very misleading to the English grower. Fisher's Torch is described as producing large blooms, when in reality it is a medium-sized decorative variety, but the colour is very striking.

Miss M. M. Johnson and Radiance were sent as early October-blooming varieties, when with us they are now (December 9) at their best. Miss H. Robinson can hardly be considered an 1895 variety, having been grown in this country the previous season. One of the largest American growers informs me privately that he considers this "the finest, most remarkable and valuable variety" he has. Early in November he cut and disposed of 1000 blooms at 1s. each, wholesale. With us this variety is not a success, neither can it be considered an early variety; the early crown bud, which the American growers "take," with us fails to expand.—W. J. Godfrey, *Exmouth.*

Coarse Chrysanthemum blooms.—I quite agree with "H. S." in his remarks on page 443 respecting these, but I am afraid it is useless to attempt to write them down. Nearly all judges profess to object to coarse blooms, but still it is these to which prizes and certificates are awarded, irrespective of colour. In the matter of colour we have much to learn from the Americans; with them it is the first consideration, and flowers are judged in that country for their decorative value only. Can anyone realise what a "beautiful" effect a vase of large blooms of, say, International, Miss Ethel Addison, or Mrs. C. W. Clarke would have? I do not write against large flowers in general; far from it. Bold and handsome blooms should be encouraged, for they show superior culture, but coarse, dull-coloured blooms should not be pointed higher than slightly smaller, brightly-coloured ones. The large, handsome blooms of Mme. Carnot, Mutual Friend, Col. Smith, Phœbus, Wilfrid Marshal, and others that could be mentioned cannot fail to be admired. I admit there are two varieties which sometimes lose points if lacking in colour, viz., Viviand Morel and Etoile de Lyon, particularly the latter, but such as Mrs. W. H. Lees, Rose Wynne, and International, which were sent out as coloured varieties, can be shown with success if only of a dull or dirty white. Flowers should be grown for their beauty, and there is very little in the varieties mentioned by "H. S.," excepting, perhaps, Van den Heede, and I must differ from "H. S." when he says this is the ugliest of all the coarse flowers. From the late buds the blooms are distinctly pretty, but the colour is not one that shows to advantage in such a building as the Aquarium.—W. J. Godfrey.

OUTDOOR CHRYSANTHEMUMS.

Though the list of varieties (p. 451) is a fairly good one for giving bloom out of doors, I think a much better selection can be made from more modern raised varieties. Like the indoor sorts, which have been very much improved during the last half-dozen years, the outdoor kinds have undergone a similar improvement. From the middle of September until the same time in November is the season when outdoor Chrysanthemums are valuable. Before that date their blooms are not wanted, so many other hardy subjects being available. After the middle of November we can hardly expect very good returns from open-air plants. Plants growing against south walls bloomed until quite the middle of December. Perhaps during the month of October is the time when outdoor Chrysanthemums are the most valuable, just before the regular indoor sorts are fully developed. In addition to the varieties named by "E. B." (p. 451) the following will give good returns. I do not risk leaving the roots in the open all the winter. When the plants have had their last blooms removed, I have the roots dug up and stored away in a cold frame in refuse potting soil or leaf soil. Here they remain until the middle of February or later. The lights are pulled off every suitable day while they are in the frame to prevent the sucker-like growths becoming drawn up weakly. The roots are then pulled to pieces and planted in boxes in sandy soil, where they make stocky growth, and by the middle of April they are bushy plants. A west border is a favourable site for the summer growth and early autumn flowering, as in the case of an early frost in October the plants have ample time to thaw before the sun strikes upon them owing to their position. I do not pinch the points out of the shoots, but allow them to grow away freely. Ryecroft Glory heads the list of outdoor varieties; it is one of the most remarkable early Chrysanthemums we have. The colour is a rich yellow, suffused with bronze. It grows 4 feet high and fully a yard through. Mme. Eulalie Morel has deep cerise golden shaded blossoms, and is one of the finest of early-flowering Japanese. Arthur Crepey is an improved Mme. Desgrange; it flowers later too. The flower-stalks are longer, and therefore more valuable for cutting; the colour is primrose-yellow. Comtesse Fouchier de Cariel is the best of bronze-coloured varieties. General Hawkes, crimson-amaranth; Mme. Marie Masse, lilac-mauve Japanese; M. G. Grunerwald, Montagu, rich purple-crimson; Roi des Précoces, crimson, one of the best of outdoor varieties; Samuel Barlow, bright salmon-pink; Vicomtesse d'Avene, rose colour, free and good in every way; and Mrs. Conway, primrose-yellow, are all good outdoor varieties. E. M.

Early-flowering Japanese Chrysanthemums.—Considering the large number of so-called new varieties that have been distributed from time to time, it is remarkable how few are really worth growing. Recently I saw a large field occupied with these for supplying cut flowers for market. Bright and decided colours are sought when one has to grow for sale, but the market guide is also a pretty certain indication of the general taste. In the case of the grower under notice scores of sorts have been tried and found wanting, until one may reduce the popular kinds to less than a dozen. The following are excellent for outdoor flowering, viz., Mme. C. Desgrange, white; G. Wermig, yellow; M. G. Grunerwald, pink; M. Dupuis, bronze; Roi des Précoces, red; Comtesse Foucher de Cariel, orange-yellow; Mme. Eulalie Morel, cerise, shaded yellow; Mme. Marie Masse, deep lilac; Orange Child, and Mme. Zephir Lionnet, bronze. —H. S.

Exhibiting pompon Chrysanthemums.—The Horticultural Society in Norwich offers prizes for twelve varieties of pompons, six blooms in a bunch, with foliage as grown. As this is much the most effective method of exhibiting this section that I have yet seen, I draw the attention of readers to the class. Usually but three blooms of one variety are required, and, as is very often the case, some of the blooms are quite small, then more of the stand can be seen than aught else. Not so when six blooms of each variety are stipulated for, as the increased number admits of a more pleasing arrangement. So fine an exhibit was the first prize stand, that I give the names of the varieties for the guidance of others. They were Rubrum perfectum, rich purple-crimson; Golden Mme. Marthe, bright golden yellow; Marabout, white, fimbriated florets; Florence Nightingale, pale pink; Comte de Morny, bright purple; Ossian; Black Douglas, rich dark crimson; Mme. Marthe, white; Perle des Beautés, crimson; Lizzie Holmes, canary-yellow, tipped rose; Mlle. Elise Dordan, soft lilac-pink, and Eclipse, bronze-red, tipped yellow.—E. Molyneux.

Exhibiting Chrysanthemums in baskets or vases.—The plan of arranging large blooms of Chrysanthemums in baskets or vases to show their decorative effect is, I am pleased to see, much on the increase. Not only does such a method of arrangement dispense with the cups and tubes, but it does away with the uniformity met with in the usual run of exhibitions of this flower. By the aid of some additional greenery, such as Asparagus plumosus, Eulalia japonica, Smilax, sprays of Berberis aquifolium, Cryptomeria japonica, natural Grasses dried, pieces of Honesty, or indeed any kind of foliage suitable for the purpose, a few pieces of yellow-tinted Beech boughs or sprays of the common Guelder Rose with the bright crimson of its leaves in the autumn are most suitable, especially when care is taken not to place the latter too near blooms of the same colour. At Windsor prizes are annually given for such an exhibit as I have mentioned, and a pleasing feature of the show it makes. Twelve blooms are stipulated for, any section being admissible. The flowers must all be cut with stems not less than 12 inches long. Quality of flower combined with a pleasing style of arrangement is of course the points to aim at. The first prize was awarded this year to a circular basket neatly covered with small-growing Ferns and trails of Asparagus, thoroughly hiding the basket. The blooms were excellent and arranged along with Cyperus alternifolius lightly disposed. The second prize exhibit consisted of an oval-shaped basket, the wicker-work being neatly hidden with trailing pieces of Traveller's Joy and other suitable materials. In both exhibits every bloom could be easily seen. Such exhibits as these illustrate the value of the Japanese over the prim-looking incurved blooms, the stiff, reflexed varieties, and the Anemone kinds with their cushion-like centres.—M.

Chrysanthemum Souvenir de Petite Amie.—This pure white Japanese is one of the best for decoration. Those who like fairly large blooms, but more of them than are produced by the orthodox method of cultivation, would do well to put in strong cuttings in February, allowing the plants to break naturally and retaining from eight to ten shoots from the first break. This Chrysanthemum is clothed profusely with extra dark green leaves. Mildew does not appear to attack this variety so readily as it does some others.—E. M.

SOME MORE NEW CHRYSANTHEMUMS.

Since writing the article which appeared in The Garden on page 413 there have been several other meetings of the N.C.S., and a few more varieties have come under my notice which bid fair to become promising kinds. It may therefore be useful to place their names on record.

Surpasse Amiral (Calvat).—A very large Japanese variety, having narrow florets of great length; colour golden yellow.

Bonnie Dundee (Owen).—A well-formed incurved of the old show type; colour golden yellow, tinted bronze, something in the way of Barbara, but having flatter and broader florets.

M. E. Roger (Calvat).—The novelty hunter will probably appreciate this most. It is a Japanese incurved, round and solid in build and of good size. The colour is a peculiar pale watery green, on a white ground.

Robin Adair (Owen).—A Japanese Anemone, with several rows of long, drooping guard florets. The colour is lilac-blush and the centre is tinted yellow.

Wm. Slogrove (Slogrove).—A large Japanese, rather loose in form, with incurving florets, which are of medium width; colour deep golden yellow.

Olive Oclee (Oclee).—Another massive-looking Japanese incurved; the florets are of medium width, deeply grooved, and of great substance; colour golden bronze, tinted purple.

Golden Dart (Jenkins).—A capital decorative or market variety. A flat-petalled Japanese, pointed at the tips, very free flowering, and of a pure pale yellow colour.

Mrs. Hermann Kloss (Davis).—A Japanese of large size, one of the most distinct and striking novelties of the season. The florets are long and flat, the colour rich golden yellow, suffused crimson.

Surprise (Jones).—A Japanese Anemone of large size; the ray florets are flat and slightly incurve at the tips; colour deep lilac-mauve, centre good and of same colour.

Mme. J. Bernard (Calvat).—Japanese incurved, with finely grooved florets, which are very long and pointed at the tips; colour deep rosy lilac-pink, paling off towards the tips to silver.

Miss Phyllis Fowler (Fowler).—One of the old type of incurved, very full and deep in build,

medium-sized, pointed florets; colour pale primrose.

J. W. McHattie (Owen).—A large Japanese, very effective; colour rich crimson, with tips of bright gold. Florets of medium width, slightly incurving at the tips.

Mrs. R. W. E. Murray (Jones).—A very fine globular Japanese, very full and double, deep in build. The florets are narrow and intermingling, and the colour is a pure paper-white.

C. Harman-Payne.

SHORT NOTES.—CHRYSANTHEMUMS.

Chrysanthemum Snowdrift.—Amongst reflexed Chrysanthemums this pure white variety occupies a prominent position. The loosely arranged and pointed florets give the blooms a distinct appearance, and, owing to their purity of colour, cannot fail to be admired.

Chrysanthemum Hairy Wonder.—Although the varieties of hairy-petalled Chrysanthemums are numerous, there are but very few that are cultivated to any extent. The novelty of this peculiar-looking section appears to have worn off very much. Hairy Wonder is undoubtedly one of the best sorts in cultivation. The perfectly incurving florets fold over neatly, making a really massive bloom, buff in colour.

Books.

LES BROMELIACEES.*

This is a handy and well-printed volume of 150 pages, giving a clear account of the Bromeliads, a natural order to which the Pine-apple belongs. Those who may not have seen the collections of species in France or in Belgium, where these plants are far more generally appreciated than in the British Islands, may nevertheless see very full and complete collections of them in the Botanic Gardens at Kew, at Glasnevin, at Cambridge, or at Edinburgh and Glasgow. The Bromeliads have a precision of form, a certain primness of make, and a variety in both their formation and leaf colouring that specially recommend them to our Continental friends, and seeing that their evergreen beauty and variety—in a word, their permanent interest—are so great, the wonder is that they do not more often find a place in our flower markets. Many of the hardier kinds lend themselves to window culture, and on the whole are perhaps even more satisfactory than the commoner species of Aloes, Cacti, Agaves, and other succulents much more often so grown. Like the Cacti, the Bromeliads are essentially South American, where they are often found growing as either lithophytes or as epiphytes on rocks and on trees. One species especially commonly known as Spanish Moss or Old Man's Beard, viz., Tillandsia usneoides, is common in the Southern United States, where it drapes the trees in swampy forests all along the Gulf of Mexico, and it also dangles and sways from the Magnolias and Pine trees in Florida and Texas. This kind is of silvery whiteness, and is not unfrequently grown in our hothouses as a curiosity. Its method or mode of fixing itself to twigs and branchlets by its spirally twisted leaves and stems is a very pretty illustration of adaptability to its native environment. Some of the Tillandsias were amongst the first of all epiphytes or "air plants" ever cultivated in England, having been brought by sailors from South American ports and hung up in the windows on their arrival at home. One striking peculiarity of many Bromeliads is their inverted bell-shape or vase-like conformation. In some cases the leaves form a water-shed of some considerable area and are broadened out at the base, and are so firmly compressed together below that they form receptacles for the rain or for the heavy dew that is condensed on their leaves during the night. This power or habit of collecting water must be of especial aid towards the full development of these plants in a hot, tropical climate, where the plants themselves exist in open, elevated and sunny positions on exposed rocks and trees. These natural water vessels or receptacles also serve to collect leaves, insects and other débris, so that doubtless some little extra supply of nitrogen, as well as mere moisture, is thus obtained. The flower-spikes of the Bromeliads that thus collect water are by it isolated, and so protected from creeping insects that might otherwise injure or annoy them. These watery receptacles also now and then furnish suitable habitats for other plants belonging to other natural orders, and, apart from various Mosses, Lichens and Schizomycetes, or bacterial fungi, some flowering aquatics, such as the Utricularias, have been repeatedly seen growing and flowering in these natural or living fountains. In Costa Rica, and also in Guiana, the lovely Utricularia Humboldti, U. peltata and other species have been seen happy and flourishing in the funnel-like sheathing leaves of Billbergias, Tillandsias, Lamprococci and Æchmeas.

The author tells us that these beautiful plants grow up healthy and happy in Brazilian forests, or high up on the Andes, in the warm parts of Mexico and Peru, in the dense forests of Guiana—everywhere beautiful, growing up or dangling down, bearing flowers like gorgeous butterflies of all colours, green, red, yellow, orange, scarlet or blue. Some have leaves flamed, mottled or striped with red, magenta, yellow, chocolate or purple, and others have curiously flattened flower-spikes like feathers of tropical paraquets, or of cockatoos or trogons. One of the most remarkable of all the species is perhaps the gigantic Puya chilensis, of which there are paintings in the "North" gallery at Kew (see Nos. 16, 25 and 26 in the Chilian section). Miss North said that to see this one noble plant at home on the cloud-swept Cordilleras near Apoquindo was alone worth all the discomforts of a long sea voyage. Bromelia Penguin is used in the West Indies as a common hedge plant, and the gorgeous Billbergia zebrina is another of Miss North's subjects (see Nos. 31 and 139).

The book contains interesting chapters on the Pine-apple and on its commercial importance to St. Michaels and other islands of the Azores. There is also a chapter on the beauty and usefulness of the variegated Pine-apple plant for decoration, and those already fond of this plant may like to know that there are at least two other variegated forms, viz., Porteana and cochin-chinensis. Although mention is made of imported fruits, I do not notice any mention of the extensive trade now being carried on in tinned or canned Pine-apples from Singapore. The fruits are pared and the core is scooped out, after which they are covered with hot syrup and hermetically sealed. I also fail to see any allusion to the curious "Hen and Chicken" Pine-apple, which is not unusually met with in the Malay Peninsula, and especially in Labuan. It is simply a proliferous form, having five to seven smaller fruits clustered around the base of the large central one. The Pine-apple is a good example of those American productions which very early in the history of civilisation found their way eastward, back eddies, as it were, in the flowing current of civilisation westward. Maize and Tobacco and, more recently, the now ubiquitous Potato and Tomato are other instances of this reflex action, so to speak, in civilisation.

There are descriptive notices and illustrations, consisting of woodcuts, in the text of all the principal ornate Bromeliads, such as Tillandsia, Billbergia, Æchmea, Vriesia, Puya, Pitcairnia, Guzmannia, Caraguata, Nidularium, and others less well known, and at the end of the volume are tabular lists of the hybrids, so far as they are known, several being illustrated, and in all known cases their parentage is given. The best collections of Bromeliads, perhaps, on the Continent are those in the Botanic Gardens at Paris, Berlin, Liege, and Leyden. Amongst amateurs, M. le Dr. le Bèle, of Mans, and M. Liais, of Cherbourg, both possess splendid collections, as also does M. Delavansaye, of Fresnes, Marne-et-Loire. The late Professor Morren was the great historian of the group. His superb collection of living plants, specimens, drawings, and botanical books was dispersed only a few years ago. As I have said, the inflorescences of these plants are sometimes most gorgeous as seen fluttering and waving to and fro amid luxuriant verdure under a tropical sky. At home they live on the trees along with the monkeys, and the toucans and the gorgeous humming-birds hover and flutter around their flowers like so many brilliantly painted fairies on honeyed sweets intent. Orchids and Bromeliads alike are wild and free all around on rock and tree as the tired traveller sips his coffee after his frugal repast, or takes his dessert from the nearest Orange, or snatches a ripe Pine-apple from the hot and dry roadside. In Singapore the first thing the European traveller may see on landing is the cartloads of Pine-apples or of Sugar-cane beside the hot and dusty roads. As a rule a Chinaman is the vendor, and for 3 cents you may pick the finest fruit from the heap, or for 6d. take as many as you can carry. The fruits are so ripe and sugary—nectar oozing out of them, so to speak—that the wily heathen Chinee knows full well that a decently-dressed European will not hug too many.

Home-grown Pines are delicious in flavour and in succulence of texture, no doubt, but a Pine ripened in the open air under a tropical sun is finer in all ways. I think Barnes, of Bicton, once ripened Pines in the open air in England by placing or planting them out in a sunny spot after they had become fully formed, and some special comment was made at the time on the additional flavour that had seemingly thus been acquired. We cannot all grow Pine-apples, and now-a-days it would not pay to do so, since splendid West Indian fruits of 4 lbs. to 6 lbs. each may be had in London for 2s. to 5s. each; but we can, and I think we ought to grow more of the best of the more ornamental of the Bromeliads than is at present the rule. If only some of our large market growers would take the best kinds in hand, I feel sure they would soon rival the wretched artificial plants now to be seen in some of our public places.

F. W. Burbidge.

* "Les Bromèliacées." Par Leon Duval. Bibliothèque d'Horticulture et de Jardinage, avec 46 figures dans les texte. Paris: Octave Doin, Editeur. 1895-96.

Stove and Greenhouse.

DAFFODILS FOR FORCING.

Among flowers that may be forced into bloom quite early in the new year, and frequently before that time, are both single and double Daffodils. These are, without doubt, among the most popular at this early season; and, unlike some other forced flowers, these Daffodils when properly done lose none of that exceeding beauty that grace their more natural flowering in the open ground in the early spring months. On the contrary, the protection they receive when grown under glass rather adds to their beauty in at least two ways; first, by the purity of the flowers; and secondly, by a considerable addition to the length of their flower-stems. Growers of Daffodils in the open, and particularly in the so-called early districts, know something of the drawbacks from both, and where the flowers are gathered in the bud stage it is a very difficult matter to make the bunches appear at anything like their full worth. With judicious care under glass, however, the flowering stems are generally considerably longer, no mean advantage when required for market. The points in the culture of these flowers calculated to provide this increased length of stem are, firstly, bulbs that are perfectly healthy and of the first size; secondly, it is important that the bulbs should have received a thorough season of rest;

thirdly, that they should be planted by the first week in October, and if a fortnight earlier, so much the better. Other items requiring attention are shallow planting, by which I mean just covering the bulbs with soil; and lastly, their introduction into heat or glass structures preparatory to forcing. I give these points as of importance in their culture, after some experience and observation, and because many in attempting to force Daffodils for the first time are day by day straining every nerve in the direction of having them early in flower, when, as a matter of fact, the very course they are pursuing is in reality opposed to progress. In forcing these flowers it is quite possible to err in planting them too early. Bulbs that have been thoroughly dried and rested start away again into growth very strongly. Such bulbs as these must be made firm in the soil, as the mass of roots descending in a body, frequently lifts the bulb from its place. To avoid risk in this direction it is always best to plunge in 6 inches of coal ashes over all. Bulbs intended for forcing should have been planted at least six weeks previously. From experiments in this direction I have found that bulbs thus treated root, grow, and flower in a perfectly natural and uniform manner. On the other hand, bulbs that have been taken from the soil and potted up almost immediately are by no means so regular and uniform in growth and flower. This is important where pots of such things are grown for decoration and not expressly for cutting, as in the former a display of bloom is the one thing aimed at. Bulbs that have been thus duly prepared may now be introduced into the greenhouse, placing them at first in a quite cool position and away from drying influences.

Where several kinds are being forced, it may form a useful guide to the amateur or beginner if the natural order of their flowering in the open ground be followed. By introducing them into heat in this way much better results follow than by taking them in an indiscriminate way. Of the evil resulting from the latter an instance came under notice a year ago, where such kinds as Horsfieldi and poeticus ornatus had not only been introduced as the earliest batch, but to make matters worse were placed at once in the hottest end of the house, and quite near the hot water pipes. Despite the heat they refused to move, to the astonishment of the owner of them. To force Daffodils successfully, a moist temperature of 40° or 45° at night is ample, and this should only be very gradually increased as the growth becomes apparent under the early treatment. A cool bottom is always best, and on no account should the pots be placed on open stages with hot-water pipes below. The syringe may be daily used to maintain a moist atmosphere, and as growth advances water may be given freely at the roots. For very early work the Tenby Daffodil (Narcissus obvallaris) is the best of the single trumpet kinds, or if healthy bulbs are procurable, Ard-Righ. The former, however, is the more popular, of good colour, forces well, and is much cheaper also. As a second early, Golden Spur is excellent in every way. Among doubles, the old Double Yellow is by far the brightest and noblest of them all, doing grandly as a pot plant, and also making a fine display when cut. The indispensable N. poeticus ornatus requires a long season of preparation to force well; first in frames, and from these through one or two stages, each of about a fortnight's duration, with slightly increased temperature each time. If placed from the open direct into heat, the chances are that the flower-stem will become strangled in the neck of the bulb. Get it to pass this critical spot in the cooler stages if possible, and success is ensured. E. J.

TUBEROSES FAILING.

I am sending some spikes of Tuberoses for your inspection, and shall be glad if you can tell me the cause of their failing. The house in which they are growing is span-roofed, with Stephanotis trained on the roof. This has been well pruned to let in the light. The temperature of the house at night ranges from 63° to 65°, according to the weather, with a day temperature of 65° to 70°. The bulbs were potted in the beginning of August in small pots, and plunged in a little bottom-heat to start. The spikes which I am sending for your inspection are from an early batch that have pushed flower-spikes without much leaf growth. I have some 2000 bulbs just pushing their spikes, which have got a good growth. These have been potted from the small pots into 4½-inch pots.—H. Lewis.

*** You appear to have kept your plants at the right temperature both as regards top and bottom-heat, and we do not think the culture is at fault at the start, but from the appearance of the spikes sent we think the top growth has been in advance of the roots. Your second lot of plants now throwing up spikes should do better, as growth should be more active and the pots full of roots. We do not see the advantage of potting twice. Why not pot your bulbs into 4½-inch pots at first, instead of 3-inch pots, and again into 4½-inch pots, as the shifting will perhaps have something to do with the flowers being blind? An excellent plan with bulbs wanted for very early bloom is to plant in the small pots, and allow them to remain in the same pots and in the plunging material till the flowers open. Of course the plants are kept dark at the start, and though a few will push spikes without foliage, there will be few failures if the bulbs remain in the bottom-heat till the flowers show colour.

In your note you say you gave a little bottom-heat to start the bulbs, and at the time you name the season was very hot. Bulbs would require more moisture at such a season, as the African bulbs this season were firmer than usual. Our method is to give one thorough watering when placed in the plunging material, and we found it was not sufficient, as the bulbs made little root growth and too much top. We presume yours is a similar case, and would advise you to give more moisture to plants plunged in a dry, warm border. You do not say whether your bulbs were kept dark at the start, or if you covered over the tops to retain moisture in the soil—a necessity with African Tuberoses. The best way to encourage root growth in advance of the top is to plunge in frames and cover to keep dark, keeping the plants dark till the roots are well round the sides of the pots.

We now come to variety. You do not name the sort you send, but from the specimens received it appears to be the African Tuberose. We do not like the African Tuberoses, as they are too long in the growth and make weak top growth. By getting late importations of American Pearl, potting late, plunging in fibre or ashes, and growing in the open till October, or with cold frame shelter, the last-named will give splendid blooms in November and December. We have seen so many failures with African bulbs that we never advise their culture. They are also so subject to red spider, that it seems impossible to keep them clean, and when the flowers are nearly fully developed they turn yellow and do not open freely. With later bulbs of the African Tuberose there is more certainty of bloom, but even then they are vastly inferior to the Pearl and others of the American type, which produce dwarf tops, compact spikes, and good flowers.—Ed.

Plants in J dd fibre.—The note on Ferns (p. 117) in this new material was interesting, and I can in a small measure supplement the remarks made as to its value for plant growing. Hyacinths, Tulips, Crocuses and similar bulbs do grandly in it, and those who find a difficulty in getting loam may rely upon getting splendid results by its use. I am trying other plants in it. Primulas and Bouvardias do equally well. Liliums look most promising at present, and other plants, such as require perfect drainage, should do well. Vines will start in the fibre grandly; indeed, it is an excellent material for striking them, as they soon root into it and are fit to pot on.—G. Wythes.

CYCLAMENS.

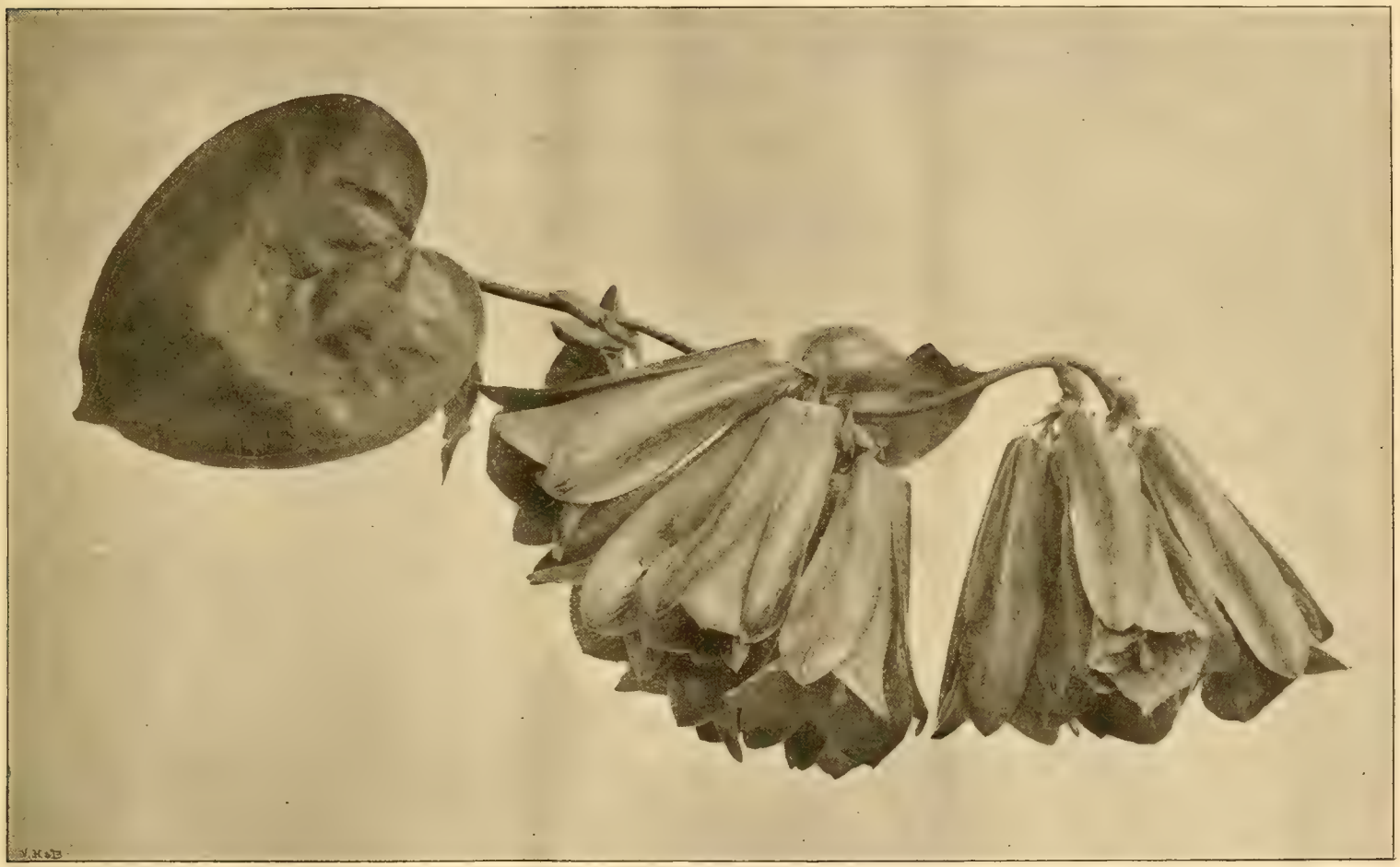
"Subscriber" (p. 452) asks how to have Cyclamens fit for show the first week in November. I can give him details of a case in which this was accomplished to the satisfaction of the exhibitor. The seed was sown in pans during the first week of March; the compost used was very finely sifted, and consisted of one half leaf-mould, the remainder being loam, peat, and sand in equal quantities. Good drainage was given, the crocks being covered with Moss. A pane of glass was laid on each pan, and Moss thinly spread on the glass. The temperature at the time was 65°. The seedlings appeared very shortly, when the glass was removed and the pans placed on a shelf, which was covered with damp Moss and was close to the glass. Directly the seedlings showed the second leaf, and before they were removed from the pans, they were given weak soot water and liquid cow manure alternately with pure water. By the end of April the corms were as large as Peas, and the plants were placed in 2½-inch pots. One crock was used in each pot, over which a few pieces of rough cow manure were placed, the compost being the same as that used in the seed-pans, with the exception of there being less sand and the soil not being sifted. The pots remained upon the shelf near the glass at the back wall of a three-quarter span house through the whole of the summer, the roof being heavily whitened. The Moss on the shelf was always kept wet, and, the wall being covered with growing Ferns, moisture was continually rising around the young plants. The temperature of the house often ran up to 90° during the summer. In August a repotting took place, this time into 4¾-inch pots. In these pots the plants remained throughout the winter in a temperature of 65°, during which time they produced flower-buds, which were picked off as soon as they appeared. Early in June, after being allowed to become somewhat dry at the roots for a period of about three weeks, they were again repotted, this time into 6½-inch size, the soil being merely broken up roughly and the peat omitted. Two inches of drainage were given, over which an inch of rough cow manure was laid. In this case, as in the preceding pottings, the soil was not made firm, but was loose enough for the finger to be inserted into it without difficulty. When potted, the plants were placed in a close frame and kept shaded, more or less, until they had taken good hold of the fresh soil, when air was gradually admitted, the lights being entirely removed before August. The season was a rainy one, and, the plants being saturated with moisture, the only use of the watering can was to supply artificial stimulant. Every bud was carefully picked off until October 1, when the plants were brought into the house, and, after a week in the cool section, were placed in warmth. The foliage, completely covering the pots, was large, handsome, and not drawn; the flowers came up grandly, and at the time of the show, the first week in November, the plants carried between fifty and sixty well-developed blooms apiece, being then twenty months from seed. This is doubtless not express growing, but the results were satisfactory. Frequent smokings were resorted to during the time the plants were in heat to prevent their being attacked by green fly, and had thrips made its appearance, a dipping in a solution of Gisburst compound or other insecticide would have been given. S. W. F.

LAPAGERIA ROSEA IN THE OPEN AIR.

The plant from which the spray here illustrated was cut is trained on and covers a north wall 5 feet high by 12 feet in length. A wall 9 feet high at right angles on the west end of the wing covered by the plant shelters it from the west winds. In front at a distance of 18 feet stands a very high vinery, which affords it shelter from the north. On the east side at a short distance are low span-roofed houses, but not sufficiently high to prevent the east winds sweeping along the wall. The soil is composed of equal parts fibrous peat and loam with sufficient brick rubble about the size of Walnuts, and sea sand to keep the soil open. The position is 50 feet above high water mark, and distant 50 yards in a straight line from the river Conway. On the 7th of this month there were 130 fully expanded flowers of large size and good colour, and 270 buds in various stages on the plant. It yearly blooms profusely until severe and continued frosts arrive, but occasional light frosts do not injure the flowers.

R. W. Nicholson.

Bodlondeb, Conway, N. Wales.



Spray of Lapageria rosea from a plant in the open air. Flowers sent by Mr. Nicholson, Bodlondeb, Conway, N. Wales.

Wintering Cannas.—In the case of the old, strong-growing Cannas which are principally used in the flower garden, but little trouble is needed to keep them in good condition throughout the winter, provided they are kept free from frost and in a fairly dry state, but some of the newer large-flowered kinds are far from particular, especially those whose blossoms are yellow, dotted more or less with crimson. Where there are large masses of even these yellow forms they can be wintered without difficulty, but in the case of many of them, and especially the newer kinds, they are generally propagated as rapidly as possible; hence though the plants appear to be vigorous enough, the underground rhizome which enables them to pass through the vicissitudes of winter in a dry state is, in some instances at least, by no means large, and if the plants are dried off, as used to be the case with the old race of Cannas, mischief is sure to ensue. For such I advise allowing the plants to remain in their pots, keeping the soil slightly moist throughout the winter, as so treated many of the plants do not go thoroughly to rest, and there is then no need to draw on the reserve stored up in the underground portion. It is a great mistake, too, to place these Cannas during the winter underneath the stage in the greenhouse or in some such a spot, as they are then liable to get too dry, or to suffer from drip; indeed, an excess of moisture is even more fatal than drought, for in this way the large rhizomes are liable to rot. I have been several times consulted within the last few years concerning the loss among Cannas, particularly of the newer kinds, during the winter, and found in most cases it occurred where the drying off had been carried to too great an extent. At the same time in nearly every instance the mortality was greatest among the varieties with yellow blossoms, whose rhizomes are naturally more slender than those with red flowers. To the amateur with but a single greenhouse these Cannas are very valuable for flowering at different periods throughout the summer and autumn, and where there is greater heat at command their brightly-coloured blossoms may be had nearly the whole year round. In raising them from seed it should be sown by the end of February or early in March, as the plants will then be sufficiently strong to flower well the first season. This flowering race of Cannas is undoubtedly popular at the present day, for a great many of our nurserymen make quite a special feature of them.—H. P.

TREE CARNATIONS.

I have read with considerable interest all that has lately been written in The Garden concerning these beautiful flowers. It may reasonably be assumed that there is a good deal of difference in the behaviour of these Tree Carnations, directly due either to a different soil mode of culture, or the locality in which the plants are grown. For instance, as showing what I mean, I may refer briefly to two first-rate

White Kinds,

Mlle. Carle and La Neige. In this part of Middlesex the former is largely grown by the market men, to the exclusion of almost all other whites, or, strictly speaking, it occupies the leading place for purity, for size, for freedom, and continuity of flowering also. This is by no means the outcome of bigotry, but rather the result of growing side by side all other whites, both new and old. Nor is it arrived at merely by a few dozen plants, but by a comparison of house against house, month after month, and where a living is de-

pendent on the results. The last item is the severest test of all, as the stern necessity of the case will scarcely permit of a good grower of these things being carried away by a beautiful flower only, for beyond this there must be quantity and continued flowering also, or the plant finds but little favour. Then again, as a set-off against this, Mr. Crawford in a recent issue tells us he will not grow Mlle. Carle after this season. Evidently Mr. Crawford grows these beautiful flowers satisfactorily, as witness the editorial foot-note at page 329. Therefore I conclude that soil, locality, or varying modes of culture must be responsible for some of this superiority and inferiority. Mr. Crawford, I notice, also has grown these two whites side by side, and is therefore fully qualified to judge of their respective merits or otherwise. This is exactly as it should be, in the end discarding the less useful variety. Another beautiful and charming white, though (speaking from memory, as I do not grow it now) without fragrance, is Mrs. Moore, but beautiful as it undoubtedly is, it had to be discarded because it was not free enough. When quite new I obtained this and grew it to quite large size, but it was not nearly so free as Mlle. Carle under the same treatment. Then there is that very old and fragrant kind, La Belle, with its strong Clove-like perfume, that many market growers still cling to with a good deal of tenacity. Unfortunately, all the earliest flowers split the calyx, the later ones, with less material, keeping much more intact. Notwithstanding this slight defect, it is largely grown in some districts, including that from which I write. As an autumn flowering kind and up till Christmas it is of especial value, but beyond this time it is not so free till well on into May ensuing. I have frequently counted upon year-old plants of this variety three dozen or more flower-buds, the major portion of which can be secured with 3 inches or 4 inches of stem, and many much longer than this. But La Belle is one of those kinds that require more heat than many, otherwise it comes of a creamy hue and not pure white. In this respect it is difficult to properly treat it in company with the usual run, but with a houseful of plants it is a different matter. I can strongly recommend this old white for autumn use, to be replaced later by Mlle. Carle and La Neige, as the two latter are more strictly perpetual in their flowering. I believe these are all the really pure white kinds worth growing. There is the newer kind Mary Godfrey, but so far as I have seen it is wanting in substance of flower, and decidedly lacking in constitution so far as this district is concerned. The other white kinds, such as Empress of Germany and Catherine Paul, have flowers striped with red, and are certainly not first class. Next to white kinds in importance are the

Pink Varieties.

These at times are even more valuable than white, though not usually so. Of really pink kinds—I mean the pink of Miss Joliffe—we can readily count them all on the fingers of one hand. The frequent announcements of Miss Joliffe Improved is a snare which every grower of Carnations has fallen into, for in reality there is no such plant in commerce. It is indeed something akin to absurd that Miss Joliffe is rarely mentioned now in Carnation lists, and that everybody's stock has suddenly become "improved." A well-grown flower of Miss Joliffe does not stand in need of this suffix, and in fact cannot be improved, unless the plants are grown a second year, and then the fortunate grower of them will see such flowers that he will never forget. I would like to suggest this plan to Mr. Crawford, who appears specially fond of Carnations of the perpetual class. I remember quite well seeing and admiring the group of Carnations at Chiswick some years ago when the "improved" was first started. The plants were nothing more nor less than well-grown examples of Miss Joliffe pure and simple, with possibly a little bud-thinning thrown in by way of improvement. I have grown Miss Joliffe more or less for the last fifteen years and handled thousands of plants. A near neighbour used formerly to grow of this kind alone from 10,000 to 13,000, and it was among these that I saw the only "improved" flowers I have ever seen. The plants producing them were two years old, and the improvement consisted in the flowers being nearly twice the usual size, of greater substance of petal, and nearly all the blossoms had triple centres, like we see in some varieties of Roses. These flowers were magnificent, and were grown by Mr. Milne, of Hampton Hill, probably the finest Carnation grower for Covent Garden of the present time and for many years past. Few men are possessed of a fuller, sounder judgment of the merits of a Carnation than the grower I have named. I notice Mr. Godfrey speaks of his pink kind and its value when planted out. I agree with his views of the freedom of this variety for autumn work, but in producing the autumn crop of bloom the plants appear to exhaust themselves very much even when grown in pots, and I think Mr. Godfrey will be greatly disappointed if he hopes that lifted plants are going to flower "right through the winter." Even pot plants of this variety with all their roots intact cannot do so much, simply because plants that produced "sheaves of good bloom in August" must now be devoid of the lateral growth necessary for flowering in winter. Such growth, moreover, from lifted plants is usually only sparsely produced and frequently results in blind buds, particularly in foggy districts. Apart from the kinds named, Mlle. Thérèse Franco is a good and useful addition to the pink shades—in reality a warm rose-pink and the flowers full. I have seen other pink varieties, but as yet these are in private hands. Of

Scarlet

varieties there are several good kinds, notably A. Alegatiere, a wonderfully free flowering kind and of good perpetual habit. Lucifer is a rich scarlet and a better flower than the last, but not so free. Winter Cheer has very fine scarlet flowers, that stand erect on good stems. As a flower-producing plant, however, it cannot vie with Alegatiere, the latter producing quite double the flowers from plants of the same age. Winter Cheer has a dwarf habit that commends it to growers of pot plants. Other good scarlet kinds I have seen are Foxhunter, Christmas Cheer, Vesuvius, Vulcan, Sir H. Calcraft, W. Robinson and Coronet. Among the

Crimson Shades,

Duke of York and Uriah Pike are the best. Of the former I cannot speak from personal knowledge of the plants, and therefore of its winter-flowering qualities I know nothing. Uriah Pike is undoubtedly the finest of all crimsons, a grand Carnation in every way, of good form and powerfully fragrant. This is a true perpetual, yet, while blooming abundantly during summer, autumn and spring, is not a good winter-flowering kind. With a return of bright days, however, it is soon flowering again. Mrs. A. Hemsley is also an excellent crimson that must not be omitted. The

Yellow Kinds

among perpetual Carnations are very few, and some good additions to this class would be welcomed. Andalusia has sulphur-yellow flowers, and Pride of Penshurst has clear yellow blossoms. Both are excellent types of Tree Carnations, the latter giving much the best flowers on two-year or three-year-old plants. Like Uriah Pike, this kind flowers best in autumn and very early spring, and during the winter months is best kept quite cool. Intermediate shades are more numerous, but these do not find so many admirers.

These Tree Carnations may be so grown in successive batches as to yield a constant supply of bloom all the year round. Carnations do not grow with the lightning rapidity suggested by Mr. Godfrey's note in a recent issue of The Garden, but by inserting cuttings from October to March at intervals batches that will yield flowers over a long season may be grown in various sizes of pots. The earliest batches may, according to the variety, be stopped once, or the taller kinds twice, if they appear to spike too early. Any cuttings inserted after February are best not stopped at all, particularly so if they are of dwarf habit like Winter Cheer. One point in these plants must always be remembered; it is this: If they are to flower at all well during winter the spike must be pushing up by the end of September. All pinching or stopping should be done with this in view.

E. J.

POTTING LILIUMS.

At page 447 "J. C." gives some useful information on this subject. No good grower of Liliums would leave over repotting until the spring. Of course dried roots of L. auratum may be purchased in the spring and be potted up. I bought fifty bulbs on one occasion as late as the end of February; they were carefully potted in moderately sized pots, using the soil in a fairly moist condition. The point I consider of the most importance after potting is the position the plants occupy. The pots should be plunged well over the rims in cocoa-nut fibre refuse, and they must be protected from heavy rains or melting snow. The bulbs have no roots at first (at least, no active rootlets), and a deluge of cold rain might kill half of them and cripple the rest. I always manage to plunge the pots in a cold frame with glass lights, and they are not disturbed until the growth of the plants is seen to push above the cocoa-nut fibre, or whatever plunging material is used. The fibre is then removed down to the rims of the pots, and if the plants are dry at the roots they are watered. This must be done carefully at first, or until it is seen the stem-roots are pushing out freely. This is an important period in the life-history of the Lilium. In the first place, allowance must be made in potting the bulbs. The soil should not be nearer the rims of the pots than 1½ inches, and by the time a good surface dressing is needed it will have sunk to 2 inches. I consider the best potting material for Liliums is two parts good yellow loam, one part fibrous peat and one part well-decayed stable manure, with coarse white sand added if necessary. For the surface dressing a double portion of manure should be used. I find Lilium lancifolium and the hardier North American Liliums do very well plunged out of doors, without any protection during winter, in districts where I have lived where the annual rainfall does not exceed an average of 24 inches. If Liliums are stood out of doors it is essential that they should be plunged rather deeper. L. auratum suffers from being plunged out of doors, although when established in Rhododendron beds or in well-prepared soil it will grow 5 feet or 6 feet high, and in some cases (as in Mr. Wilson's garden at Weybridge) 11 feet. To grow the remarkable specimen alluded to, the bed had been prepared to the depth of about 5 feet. Some Liliums do better planted out than in pots, but they should

not be disturbed too often. I have had Lilium californicum doing well for a decade without even surface dressings of any kind, and the noble L. giganteum does well in prepared beds of peat and loam out of doors, although it also succeeds when grown in pots. I quite agree with "J. C." as to the importance of potting the bulbs as soon as the old stems decay, and it ought to be done without doing any material injury to the basal roots. The stem roots have done their work and must be removed with the stems. The stems and roots can be removed together by carefully pulling them out by hand. J. Douglas.

Ilford, E.

Orchard and Fruit Garden.

PEAR MARIE LOUISE D'UCCLE.

There are few varieties of Pears more prolific than the above in favourable and unfavourable seasons alike. Amongst a large collection of Pears on a soil far from the best for this fruit, I have not known a failure for many years, there always being a crop, occasionally light, but as a rule very heavy. The tree also possesses the advantage of succeeding equally well on both the Quince and Pear stocks. In addition to these excellent qualities it may be mentioned that the fruit attains a fair size under ordinary conditions and cultivation, with a good shape and nice russetty yellow colour when ripe. In the large midland markets the fruit realises a very good price in almost all seasons if consigned to salesmen or other purchasers just before it becomes mellow, which is earlier or later according to the seasons. This year all were fit for use by the middle of October, while in some previous seasons the fruit has kept wonderfully well up to the end of November. Market growers who have planted Marie Louise d'Uccle in quantity have had no cause to repent selecting the variety, for though no extraordinary prices are obtained—as is the case with some other varieties—the results are certainly pleasing and practically assured, provided the soil and district will produce decent Pears. On strong and deep land the Quince stock answers splendidly for the variety under notice; in fact, the Pears will be so abundant that heavy thinning is a necessity to get large fruit. When it is seen that the crop is going to be satisfactory, heavy mulching with rich farmyard manure is advisable, spreading it several feet away from the stem on all sides. As a rule, all the finest feeding roots are at some little distance from the trunk, and to pile all the mulching close up to the tree is of comparatively little use, owing to the fertilising elements passing away without touching the fibrous or extreme roots. Another advantage of working Marie Louise d'Uccle on the Quince, according to my experience, is the decided improvement in the flavour of the fruit. Under ordinary conditions its quality can only be classed as fair, and in some seasons even poor, especially from trees on the Pear stock; but, as stated, when grown on the Quince and supplied with a liberal diet at the roots, the fruit acquires a size and flavour that are far superior to those of many other varieties that lay claim to being good and delicious. A peculiar feature of Marie Louise d'Uccle on the Quince is the way in which the foliage turns up at the sides, as indicated in the illustration. I have about 100 trees in bush form growing on the stock named, and whether the seasons are wet or dry, sunless or otherwise, the leaves close up like a Pea-pod, and this without any signs of bad health or weakness, as proved by the full crops and large fruit. On the Pear stock the foliage seldom acquires the form indicated, or if so, the local influences are different from what they are in this portion of the west of England. Again, seasons have a most wonderful effect on the flavour of the fruit on trees on the Pear stock. Last year the quality was the best I ever tasted; this year it is the worst I ever knew; for although the fruit is well grown, clean, and of high colour, the term "very poor" is the only one applicable. However, in spite of this latter defect, the fruit sold freely at paying prices.

W. G. C.



Pear Marie Louise d'Uccle. Engraved for The Garden *from a photograph sent by Mr. F. Kammell, Sittingbourne.*

Scale on Peach trees.—There are few gardeners who are not troubled more or less with this pest, and ordinary insecticides seem of little use in removing it. The paraffin remedy, however, is a perfect one, and if used with judgment quite harmless. Where so many make a mistake is in postponing its use until the buds are too far advanced. They are then easily injured, and fall off as soon as the trees are started. December is quite late enough to apply the petroleum mixture, except in the very latest houses, and care must be taken not to exceed a couple of wineglassfuls to three gallons of warm, soft, soapy water. Apply it vigorously and all scale will disappear. —J. C.

Best flavoured Pears.—"D. T. F.," in supplementing Mr. Burrell's remarks on this subject at page 431, objects to Thompson's being placed in the first half dozen for quality. My experience with this Pear is, that it is most fastidious as to soil and climate, and requires a very even season to bring out its finest flavour. I also think Thompson's is more at home in midland gardens than southern ones, as anything like a hurried maturation invariably produces mealiness in the fruit. A clayey or retentive soil is also antagonistic to its well-being, the fruit from trees rooting in such a medium usually being cracked and malformed. I used to think that for flavour no variety could possibly equal Doyenné du Comice, but after tasting Huyshe's Prince Consort I unhesitatingly accord it the premier position amongst dessert Pears. From the fact that I have never seen it named in The Garden, save by myself, I conclude that it is but little known. This is a great pity, as I am confident that anyone who tasted it would pronounce it excellent. The fruit is not of the handsomest shape, being somewhat like Beurré Rance, but a little more irregular, green on the under side, and freckled with brown next the sun. It is but right to state that the trees under my charge are growing on a south wall and in a warm soil. The tree is of somewhat slow growth, but an early and regular cropper. December is its usual season of ripening in this district. Probably in southern gardens a west wall would suit it.—J. C.

—— I quite agree with "D. T. F." (page 431) in his estimate of Thompson's as regards flavour when compared with Marie Louise and Winter Nelis. Thompson's is undoubtedly a useful Pear, but I have for some time past considered the high position given it to be somewhat undeserved. Pears, however, are among the most variable of English fruits in point of quality, and it requires some courage for any grower to express an unfavourable verdict. I feel convinced that the age of my only tree—a large espalier on a west wall—is not the reason for my adverse opinion regarding the flavour of this Pear.—W. S., *Trowbridge.*

STEWING PEARS.

The stewing Pear is a greatly neglected fruit, although, as Mr. R. Parker so ably points out on page 431, it has a considerable value during the winter season, when the list of English dessert fruits is limited. Why stewing Pears are not more generally grown is somewhat difficult of explanation, for in some, indeed many, private gardens they obtain equal favour with the dessert kinds, and yet, in spite of this, very often there is only a single tree, and sometimes not even this in gardens where choice dessert kinds are appreciated at their proper value. It is quite true that a good many dessert Pears are well suited for stewing and are used for the purpose, but that is no possible excuse for the absence of suitable varieties in too many gardens. In times of a short supply for dessert it is not an easy matter to apportion an equal quantity of good fruits for the two purposes economically. As with the planter, so with judges at exhibitions, stewing Pears do not merit that consideration they deserve; there is usually a loss of a point or two in the decision should a collection contain a dish of these in a close competition. Mr. Parker's suggestion to framers of schedules, where he advises a class for stewing varieties, or stipulates that one dish at least in a collection must be a stewing sort, is an excellent one. This would help to popularise them, and bring them into greater prominence with everyone concerned.

Very large fruits are usually associated with this section, Uvedale's St. Germain and Catillac probably being the varieties to which the most favour has been shown. Medium-sized rather than large fruits I find the most useful, for the simple reason that a far heavier crop is produced by the tree. A few large fruits are very well for special purposes, but in the case of those who are expected to provide an almost daily supply for four or five months, a few large fruits do not avail very much. One of the best Pears I know for stewing is Gilogil, a medium-sized round fruit, and one that may easily be taken for a dessert kind, by reason of its bright russet colour and clear skin. I noticed some fine fruits of this sort in Messrs. Bunyard's nursery last autumn, and, except my own fruit, I do not remember having seen it anywhere else. This, however, does not prove that it is not much grown, but is simply debarred because it does not happen to be a dessert variety of the size and appearance of the much over-rated Pitmaston Duchess. Bezi d'Heri is another variety of much value, this,

too, being of medium or below medium size. With these two a supply can be maintained from September till the end of January. For the last three seasons the latter has not failed to produce a good crop, and the other has taken only a partial rest one out of the three years. This supports the views of Mr. Parker in that these Pears have apparently a stronger constitution and are devoid in a marked degree of the unreliable traits of some of the more popular dessert sorts. Before the planting season closes, I would, with Mr. Parker, strongly advocate the inclusion of at least one tree in a collection, however limited that may be, for there is the chance of having stewing Pears sometimes when ripe fruits are unavailable, except by purchasing perhaps foreign Pears at what to many would-be consumers may be considered a prohibitive price.—W. Strugnell.

—— Mr. Parker's remarks on these at p. 431 are well worth notice. Some two years ago I advocated in these columns the more extended culture of stewing Pears, and condemned the practice of planting them, as is very generally done, in out-of-the-way corners or behind north walls. How often have we heard the remark by planters that any place will do for stewing Pears. Now I hold that if stewing Pears are worth growing at all they are worth growing well, and indeed pay to do so. Many people are quite ignorant of the difference between fruit, even of the common Catillac, gathered from trees occupying a warm wall compared with those from orchard trees. As Mr. Parker observes, the flavour of a properly prepared dish of stewed Pears is delicious. Then some varieties are far better than others. For instance, Vicar of Winkfield and the more recently introduced Directeur Alphand are far in advance of Catillac. The former with me is in good seasons sweet enough for dessert from a south wall.—J. Crawford.

INARCHING MUSCATS.

I have a number of Gros Colman Vines ten years old. They are planted inside and do fairly well, but I wish to have part of the house Muscats. Do you think Muscats will do if I inarch them on to the Gros Colman? I shall have to purchase young Muscat Vines for the purpose. Should I inarch ripened rods, or cut back and inarch the young growths when strong enough? Would a White Tokay Vine be worth trying in the same house?—Jones.

*** You may inarch the Muscat on to Gros Colman stock with every prospect of success, provided care is exercised when the Grapes are ripening. It will be best to inarch young wood on to young wood, but if the Vines are fairly strong and quite healthy, you need not cut them down to the front lights, as this would cause the loss of a crop of Grapes. In order, however, to give the newly-inarched Muscats the best possible chance the first season, cut off all the spurs but one from the Gros Colman for a distance of 5 feet from the first wire of the trellis, retaining one at the base for producing a growth on which to inarch the young Muscats. The remainder of the old rods can then be cropped the first summer, while the 5 feet of Muscat growth trained over the bared portions of the Gros Colman rods will, by having the full benefit of light and air, ripen up thoroughly by the autumn, and thus lay a good foundation for increased vigour the second season.

At the end of the first season's growth the old Vines may be cut back to the point of union with the new, and the young canes have the whole of the room to themselves. If the Gros Colmans are planted, say, 4 feet apart and are strong, then they may remain as they are and be cropped lightly, the Muscats being inarched on a strong shoot at the base of the rod, and be trained up between them, two leaves only being left beyond the Colman bunches to further increase the room and light, the old rods being removed when the young Muscats have reached the top of the house. If the Gros Colman is at all weakly, the best way will be to cut the Vines right back to the front lights, and to inarch the Muscats on the new breaks when sufficiently advanced. In addition to this the stale soil should be removed from the surface of the border, baring a few of the topmost roots, and laying on from 3 inches to 4 inches of fresh loam, with a sprinkling of bone meal and new horse manure, firming it well. The only objection to having both Gros Colman and Muscats in the same house is that the former is so much later in ripening than the latter and requires much more air while laying on bloom; but if the Vines are started early enough to allow of the fruit of both ripening before the cool, damp nights set in, the same treatment should suit them. White Tokay, although only a second-rate flavoured Grape, is nevertheless very useful when well grown and thoroughly ripened, as it hangs in a firm and sound condition after the Muscats have shrivelled. To ripen White Tokay properly it requires plenty of heat, and the Gros Colman stock should suit it.—J. C.

NOTES ON PEARS.

If "D. T. F." (p. 431) had a thoroughly good Thompson's Pear he would hardly hesitate to include the variety among the best twelve, or, to come even a little closer, the best nine kinds. My experience of this is of comparatively recent date. When planting a stretch of cordons a few years ago I was strongly recommended to give it a trial alike by the firm that supplied the trees and by friends in the midlands and west of England. It has done remarkably well, and that, too, on a soil none too good for Pears—a sandy loam, changing to sand within 18 inches of the surface, and necessitating annual top-dressing to secure good fruit. The only drawback to Winter Nelis is the size; despite thinning and top-dressing, the fruit runs very small, not more than two-thirds the size I remember from horizontally-trained trees in an old garden. A good depth of soil, that is at once fairly good and somewhat retentive, is absolutely essential to grow this Pear to perfection. A Pear of medium size that I have (December 8) just finished is Nouvelle Fulvie, a variety that certainly might be included in all lists, as it approaches first-class in quality, whilst the tree as a cordon grows freely and crops well. Personally, I have to put Marie Louise below both Doyenné du Comice and Beurré Superfin from a quality standpoint, for the reason that, whilst I have the two latter varieties as cordons, the Marie Louise comes from old trees with stems 3 feet in circumference that Mr. McIntosh may probably have planted during his stay at Claremont. Other very old trees that I have as yet been unable to replace are Beurré Diel, Glou Morceau, Vicar of Winkfield, Autumn Bergamot, and Beurré Rance. Beurré Diel from this old tree is only occasionally good—that is, fit for dessert—not more than one season in five; this year is an exception to the rule. Beurré Rance from old trees is a decidedly better late Pear with me than Bergamote d'Esperen, which never ripens satisfactorily. To turn from the latest to early Pears, I find Williams' and Clapp's Favourite the most satisfactory; neither Jargonelle nor Doyenné d'Eté is of any good, the fruit passing too quickly from the hard to the semi-rotten stage. It might be different if we could transfer them direct from the tree to the dinner-table, but just at the time when the fruit is approaching the ripening stage it has to be sent some 600 miles, and it is difficult to catch it just right. Of Pears lacking in quality, but very juicy and refreshing, and because of their free and consistent cropping qualities often valuable when other varieties are scarce, I may mention Napoleon and Passe Colmar also from old vertically-trained trees on piers. With respect to all the old trees, the practice adopted of cutting clean away a portion of the projecting spurs each season and laying in young wood along the old branches has certainly given some better fruit, but nothing like so good as that obtainable from healthy young trees. There is a stage when old trees may be reclothed with healthy wood, but not when they are gone too far; it is then a saving of time and expense to root them out and substitute young trees, especially if there is a large demand for high-class fruit.

Whilst on the subject of Pears, I should like to say a word as to the system advocated in a recent number of The Garden in connection with summer pruning, viz., breaking the shoots partially through and allowing them to hang, a system I remember in vogue in more than one old fruit garden close on forty years ago, as well as the autumn-pruning of Peaches and Nectarines, that also formed the subject of a recent note. The great objection to the hanging shoots always seemed the very untidy appearance. A lot of half-dead shoots and leaves dangling from a wall is hardly in keeping with a trim, orderly garden. Nor is it easy to see where the necessity for the practice comes in if the summer stopping is deferred until the lower portion of the shoot for a few inches from its base is fairly hard; not much after-growth is made then, and the little that one gets is from the two top buds. It may not be out of place at the present time to suggest to those who are about to plant cordons the advisability of making certain not only as to the free-cropping qualities of individual varieties under this treatment, but also their growth on different stocks and on different soils. The cordons planted here, for instance, some five years ago have furnished matter for reflection, the majority going away freely and well; whilst, on the other hand, it seemed impossible to get any healthy growth into three or four varieties, and I have had to replace them. The three worst were Olivier des Serres, Beurré d'Anjou, and B. Bachelier. What is the general experience with these as cordons? E. Burrell.

Claremont.

Foreign Apples.—The other day I saw a couple of barrels that were forwarded as a present, and, being present when opened, had ample opportunity to judge of the condition of the fruit before it was knocked about other than from the packing, and can certify to the fact that the majority had an average of three or four large, deep bruises. The owner cited the familiar saying about "not looking a gift horse in the mouth," and I was tempted to reply with another, as to "what is worth doing at all," &c., and that it would have been far better to have sent one half or even one-third the quantity, and taken measures to ensure their good condition.—E. B. C.

Pear Winter Nelis.—No Pear comes up to this, all points considered, for flavour, &c., according to my observation; nor is this conclusion arrived at from a short period. For more than thirty years I have been closely observing the quality, growth, &c., of it in widely different districts and diverse soils. During that time I have never known it to be of bad flavour, and this regardless of situation or soil. I have met with it planted in the open as a bush, on walls on all aspects, and as cordons on a wire beside walks. On an east or west wall I have had the best results, but I prefer west. I have now one on this aspect and one on a south. When in the latter position it needs a lot of water should the season be a dry one. I am aware it is a delicate kind, and some cultivators condemn it on this account. But to succeed with it it must be planted in a warm sandy loam, as in a cold, heavy soil it does not do well.

I find it most advantageous to keep its roots near the surface by mulching. It pays to give it a good supply of manure water when swelling. With me the fruit suffers badly in a very young state if not protected from severe cold, as it causes the skin to harden, and then often the fruits crack when they begin to swell. I protect the trees when in bloom in the spring by placing Fir branches amongst them. Although it has these weak points, I consider this is compensated for by its splendid flavour.—J. Crook.

American blight.—In 1893 young Apple trees, especially cordons, suffered from American blight, and in spite of syringing freely with soluble paraffin, the enemy was not kept under, as one could not use the mixture in sufficient strength to kill all the blight without danger to the new wood and swelling fruit. I have tried various remedies advised during the season; the trees are at rest, but several have failed, doubtless because a portion of the blight is not touched, as in syringing, the portion of tree most affected is often covered by knotty protuberances which shelter the enemy. I tried soot and lime in winter, but it failed. Being determined to get rid of the enemy, I last winter painted every portion of the trees with a mixture of soluble paraffin, clay and fresh lime. It was a long job as large pyramid trees were painted, but the labour was well repaid by the absence of the pest last summer—a season that was most favourable for its development. In painting it is well to use a small portion of fresh lime, as then it adheres more readily to the bark and does not wash off in wet weather. If soluble paraffin is not at hand, it is readily made soluble by working a fair portion of soft soap into the raw paraffin. A pint of raw paraffin will make a gallon of paint mixed with the clay and fresh lime, with a little warm, soft water added after the paraffin is worked into the soap. The grower can ill afford the time to clean fruit trees in the summer with so many things needing attention. By cleaning now more care can be given, well covering every portion of the tree. It is advisable to closely examine new stock and clean it before nailing or staking.—S. H. B.

NOTES ON NEW VARIETIES OF APPLES.

Judging by the keen interest taken in any new variety of Apple staged at the leading fruit shows, and the numerous questions asked as to its quality and bearing powers, it would appear there is no falling off in the demand for novelties of sterling merit. There is no question that some valuable additions have been made to our already long list of sorts. According to my experience the following are worthy of a place in every garden, and it is very probable that some of them will prove of value to the commercial grower. While not stating that Royal Jubilee is the best new Apple, it is, in my opinion, in the front rank, and is sure to find favour in the eyes of large and small growers. The fruit is large, of a beautiful golden colour, clear skin, and will keep fresh and sound to the end of March. Really grand fruit of this variety has been staged this year, the finest dish that I have seen having been put up by Mr. J. Watkins, at the November exhibition held at Chester. Probably each fruit weighed over 1 lb. Other advantages are the late flowering and prolific habit of the trees, combined with a sturdy growth, free from canker at present with me; nor can I hear of it being present with any other grower of the variety. Newtown Wonder was awarded a first-class certificate by the R.H.S in 1887, and it seems extraordinary that such a splendid Apple should not have made greater progress, considering its many good qualities. Trees worked on the Paradise stock bear most freely, even in their infancy, and never fail to produce a fair crop of large handsome fruit in bad seasons. In good years, like the present one, the crop is very heavy, the same keeping well to the end of May. It is of fair quality for dessert during the spring months, but the fruit is too large for that purpose if other dessert varieties are available. Early Peach will most likely supersede its parent, Irish Peach, for though resembling it exactly in shape, size, and colour of fruit, the tree is much closer in growth, the wood is more freely studded with spurs and fruit-buds, and consequently promises to bear heavier crops. Wealthy is an American variety that promises to succeed much better in this country than most sorts that arrive from that source. The fruit is of good size, model shape, and very handsomely coloured. On our light soil trees worked on the Paradise stock have borne heavy crops each year since the variety was first advertised. White Transparent is not a specially new variety, but it is only recently that its merits have been appreciated at their proper value. After growing this sort for nearly twelve years I can strongly recommend it to anyone requiring a very early and excellent cooking or dessert Apple. With me it is the earliest variety, beating Mr. Gladstone, Beauty of Bath, and others of that class. In ordinary seasons the fruit is ready for use in the third week in July, and is about the size of a well-grown Keswick Codlin, of a beautiful transparent colour, and freely borne on strong, healthy wood. Beauty of Bath is a lovely Apple of a useful dessert size, and finds much favour amongst Apple eaters. At several of our best August shows this variety took all the prizes in the single dish of dessert Apples. Chelmsford Wonder may be termed a failure so far on our soil; trees worked on both the Paradise and free stocks have not produced a fruit yet; the trees are strong and healthy, and they may possibly bear freely later on, as many varieties do not crop in a satisfactory manner until they attain a few years of age; and as this variety was not much known before 1891 or 1892, it is too soon to condemn it. Byford Wonder has on several occasions been referred to in very favourable terms in The Garden during the past two years, and it thoroughly deserves all that has been stated in its praise. Tyler's Kernel is another Apple that, like the preceding, originated in Herefordshire, where there are in the older orchards many varieties not known commercially. Unless I am mistaken, there are some fine old trees around Ledbury of Tyler's Kernel, which was sent out as a new variety a few years ago. According to my experience this sort does not commence to crop very well, even in bush form, until the tree has acquired a fair size, nor does it like severe pruning, the best results being obtained from trees that have had their shoots shortened back very slightly. Lady Sudeley has been before the public for ten years or so, and has become a favourite with growers for home consumption and for market. On our soil this variety bears immense crops of beautiful fruit, and realises a high figure in the market. Gold Medal is a north country Apple of large size, and possesses good cooking qualities, in addition to a prolific habit, but I question if it will ever find much favour as a market variety, as it lacks colour, and the shape is uneven. No doubt there are many other new varieties of sterling value, but I have only mentioned those that I have grown and had some experience with.

Amongst new Apples that I have seen exhibited but not grown, Bow Hill Pippin has struck me as a variety that will occupy a high position in the future, provided it proves a good bearer and healthy grower, as the fruit is very large, handsome, and firm, and said to be equally good for cooking or dessert. McIndoe's Russet is a likely-looking dessert Apple, of excellent quality. Mr. McIndoe gave me a fruit to taste when staging a collection of Apples, and the flavour was very agreeable; he further added that the Apples kept sound until the end of March. Hambling's Seedling apparently will prove a decided acquisition, as not only is the fruit of the largest size, but it is also of good shape, heavy, and described as a good keeper and free cropper. From several samples received lately I imagine that a few more good varieties will be put on the market ere long, and it is most desirable that planters of Apple trees should reject all the inferior and practically valueless varieties in commerce, and choose only the best and most valuable ones. If there was no demand for these poor varieties, nurserymen would soon cease to keep them in stock.

W. G. C.

PEARS ROTTING IN THE CENTRE.

Can any of your numerous readers explain the following and give a remedy? I have an old garden with some very large, and probably very old, Pear trees (one covering about 520 square feet of wall). The crops are very satisfactory as to quantity, but the fruit has very little flavour and rots in the middle very soon after gathering, the late as well as the early sorts. The garden is in Surrey and the subsoil is chalk. —F. H. Lenders.

*** There are possibly several causes that may account for the Pears decaying in the centre in such an unsatisfactory manner. Probably the chief cause arises from the exhaustion of some constituent or element in the soil, as it appears that all varieties are affected in the same way. Very few people are aware of the quantity of plant food absorbed from the soil by large trees that produce even fair crops of fruit, and when one or more of the elements absolutely necessary for the production of good fruit is missing or in too small quantities for the trees' requirements, the fruit suffers in quality, sometimes by prematurely rotting in the centre in the manner of the Pears under notice, or they are gritty or woody in the flesh, with a hard core, and sometimes crack before they are ripe. The composition per 100 parts of the ash of Pears is 54·69 potash, 8·52 soda, 5·22 magnesia, 7·98 lime, 1·96 phosphate of iron, 14·28 phosphoric acid, 5·69 sulphuric acid, 1·49 silica, 0·17 chloride of sodium. According to this analysis it will be at once apparent how greatly potash enters into the formation of the fruit of Pears, and trees that continually bear good crops must be liberally supplied with this valuable manure in some form to maintain the necessary amount in the soil. Some practical men contend that farmyard manure given as a mulch to Pears supplies a perfect plant food, as it contains all the elements requisite to produce good crops of the best quality. This is only correct to some extent, as much depends on how the animals are fed and the way the manure is made and treated afterwards. This I have proved by actual experience. I have employed farmyard manure as a mulch without detecting the least improvement in Pears, simply because most of the valuable fertilising elements had been washed away in the open cattle folds. For that reason it is much better to purchase reliable chemical manures suited to the fruit and the soil. On light soils overlying chalk or sandstone, muriate of potash is a concentrated form that answers

admirably, applying it at the rate of 1 oz. to each square yard as the trees start into growth. If the trees promise to bear a good crop, a similar dressing should be given when the fruit is the size of Hazel nuts, also applying at the same time 2 ozs. of superphosphate of lime, selecting showery weather for the application. This dressing has proved of great service, not only in promoting a fruitful habit, but the Pears have been of excellent quality and always keep well without decaying at the centre so quickly as those not treated as above. Another good dressing for Pears is 3 ozs. of kainit and 1 oz. of bone-meal to each square yard of border immediately the fruit is set. Fish guano at the rate of 2 oz. to the square yard, applying it at the time above advised, acts well on both heavy and light soils. It is always advisable to gently fork or hoe in this chemical or artificial manures at the time of application, and unless the roots are far from the surface it will soon be found that the roots have discovered the food provided for them by forming a perfect network just below the top of the soil; consequently no digging should be done, or these serviceable roots will be injured. At this season sewage, liquid manure, or burned refuse can be given with decided advantage, as each and all encourage fresh root action close to the surface. Root-pruning with large and old trees is a somewhat dangerous practice, and is seldom necessary if the soil is filled with a good diet close to the surface, for, as stated, the roots will quickly find out the stores provided for them, and the effect will make itself felt in the fruit, which will assume a good size, pleasing colour, and extra fine flavour. If the roots are deep down and none to be found within a couple of feet of the surface, it is desirable to remove some of the top soil, adding fresh soil mixed with a little bone-meal, road scrapings, or wood ashes. If peat moss is employed in the stables or cattle sheds, some of that could be mixed with the soil, as I find the roots of both the Quince and Pear stocks delight in this material.—W. G. C.

Colouring Grapes.—Whilst "W. I.," in his interesting paper on the "Effect of Shade," refers chiefly to the connection of light, or its absence, on wood and leafage, there is one phase of the effect rather of light than of shade I have noticed on the colouring of Grapes. This is usually seen in span houses that run north and south. For instance, I was in October in a span Muscat of Alexandria house on the north side of London where a fine crop of bunches was hanging. But I observed that the berries on the north side were the best coloured, and, remarking upon it, the gardener said that, having seen similar results elsewhere under similar conditions, he believed that this richer colouring of the north side Grapes arose from the fact that some 12 inches or 16 inches of the top of the slope on the south side not being shaded by leafage, the rays of the sun did for some time become fully impinged on the bunches without obstruction, and that it was this excess of light which did the work. On the south side, although the bunches are near the glass, yet there is always a somewhat close shading of leafage interposed between the sun's rays and the bunches, but on the opposite side the bunches get the full force of the sun's rays, for a time at least. I noticed the same thing some two years ago at Fordingbridge in relation to that difficult colouring Grape Gros Colman, and again this past autumn in some extensive vineries at Cobham. Whilst in all the houses, where at the end, side lights gave full access to the sun's rays, the effect was most marked; indeed, the berries were, for a yard or two from these unshaded glass ends, black as Sloes literally, whilst all through the centres of the houses they were poorly coloured. It would be interesting to learn how far this experience coincides with that of Grape growers generally.—A. D.

NOVEMBER IN SOUTH DEVON.

THE past month has been the wettest since the memorable October of 1891, when over 10 inches of rain fell, the rainfall having amounted to 7·98 inches against 7·71 inches for November, 1894, and an average of 4·00 inches for the month during the past eighteen years. The number of rainy days was 20, while there were 19 during the corresponding month of 1894. The total rainfall for the 11 months has reached 28·72 inches, a great decrease from the amount recorded during the same period of last year, viz., 41·02 inches, and considerably less than the average, which is 31·64 inches.

There has been but little sunshine during the month, only 47 hours having been registered. The average sunshine for November is 61·40 hours, and the record for the month in 1894 was 73·55 hours. In the 11 months of the present year, however, we are well ahead of the like period in 1894, the record for 1895 being 1792 hours, and that for last year 1529 hours. The mean temperature has been higher than that of November, 1894, and considerably above the average, which is 47·2°, the past month's being 50·3° and that of November, 1894, 49·5°. The highest reading in the screen was 64·1°, which was recorded on the 16th, and the lowest on the Grass 32·0°, which occurred on the 24th.

The month has been especially remarkable for the continuance of strong winds, the total horizontal movement recorded being 9327 miles, which record is in excess of that of any month during the past two years. The greatest movement during 24 hours was 581 miles, which was measured on the 16th, and the greatest hourly, 45 miles, which rate was reached between the hours of 2 and 3 p.m. on the same day. On 17 days the direction of the wind has been from south to west, and on the remaining 13 days from north to east.

In the garden the only entirely satisfactory flower has been the giant Christmas Rose (Helleborus altifolius), which reaches the zenith of its beauty towards the end of the month. Strong well-established clumps will throw up fifty flower-spikes 18 inches or more in height, carrying satin-white cups full 4 inches in diameter, shaded on the reverse of the petals with a faint tinge of pink. If the stems are split up for about an inch, the flowers will last fresh in water for a fortnight, and look well arranged with the foliage of Rhododendron ponticum, which in colour and form assimilates closely enough to their own leafage to defy any but expert criticism. The variety mentioned lends itself to indoor decoration more readily than any other Christmas Rose on account of its long flower-stalks. Out-door Chrysanthemums, with the exception of those growing against walls, where they have obtained a certain amount of protection, have presented a sadly draggled appearance, the ceaseless rainfall not having given them an opportunity of repairing the damage done by the frost of October, which frost, by the way, was very partial, as I have to-day (December 2) seen, not 3 miles distant, a garden where the Dahlias, Geraniums and Paris Daisies have been untouched and are still blooming. Solanum jasminoides has held its white flower-clusters through the month, and will, seemingly, not be flowerless until mid-December. I saw the other day in the neighbourhood of Plymouth a fine specimen of Abutilon vexillarium. The plant was growing on the outside of a cool fernery and was 8 feet high by 10 feet wide. Although having received absolutely no protection during the last severe winter, it was in rude health, and was still bearing perfect blossoms on its long arching shoots. The blooms are very striking, the bright crimson calyx opening on the lemon-coloured petals, which again disclose the maroon anthers. The foliage is also exceedingly decorative, being for the most part beautifully marbled, though many of the shoots produce only self-coloured leaves. During the present year the plant under notice has bloomed for nearly six months. On November 12 I was given a spike of Polyanthus Narcissus which had grown in an open border at Torquay. The truss consisted of seven fully open flowers, their colour being white with saffron nectary. I have never previously noticed such precocity in N. polyanthus in England, the earliest date that I have myself picked the flowers being the first week in January. There have been pretty effects from the yellow-flowered Jasminum nudiflorum straying through the red-berried sprays of Cotoneaster microphylla, and late seedlings of the Corn Marigold have here and there in the wild garden given glimpses of the gold of the departed Sunflowers. On the rockery a few pale blooms of Gentianella have feebly simulated the glory of their spring display, and the fast expanding blossoms of the Laurustinus warn us of the approach of the new year. The autumnal tints, late in appearance, were fleeting in duration, though for a few days they were exceptionally brilliant. The Elms were bright gold, the Beeches copper-red, while the great Holly trees, with their clusters of scarlet berries, stood out darkly from amongst the gorgeous colouring; but when the pageant was at its height, a south-westerly gale arose, and for a day and a night the air was full of flying leaves, and the gold that erstwhile clothed the boughs soon lay 6 inches deep on the garden paths and lawns. S. W. F.

GARDEN FLORA.

PLATE 1045.

THE HERBACEOUS PHLOX.

(WITH A COLOURED PLATE OF—1, ETNA; 2, GLOIRE D'ORLEANS; 3, ADA LOUISA.*)

A NOBLE hardy perennial is the herbaceous Phlox in its many varieties, as varied almost as any garden flower in range of colouring and habit of growth. We have yet to see the Phlox well placed in gardens, the stilted, ugly regimental fashion of sticking it in rows in the border or elsewhere not revealing that wealth of colouring that is seen when boldly grouped by itself or associated with things of similar expression.

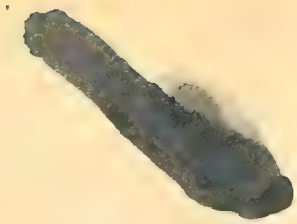
The coloured plate that accompanies these remarks shows how delightful are the sprays of bloom when gathered from these massive clumps, and how delicate is the colouring of the flowers, the variety Etna revealing a colour brilliant, distinct, and in contrast to the softer hues of the forms grouped with it.

The herbaceous Phlox is divided into two distinct sections. One is the early or summer-flowering, issuing from P. suffruticosa, and creating gay masses of bloom during June and July. A suitable selection of these should be made to get colour into the garden as early in the summer as possible, finishing with the taller kinds that have come through hybridising such North American species as P. paniculata, P. decussata and others. The great point is to get a good selection of varieties. Choose, for instance, those represented in the plate, and if all crude, harsh, unpleasant colours are eradicated, a charming series will remain. In the herbaceous Phlox perhaps more than any other flower there is a surfeit of poor colours—magentas, dingy mauve, unhealthy-looking lilacs, and washy tints that we hope never to see again. Why raisers will persist in offering such colours we do not know, unless, as is possibly the case, there is a charm to some

* Drawn for THE GARDEN by Agnes Cook in the R.H.S. Gardens, Chiswick. Lithographed and printed by Guillaume Severeyns.



THESE PHLOXES 1 ETHA 2 GL IFE D ORLEANS 3 AZA LOUISA



people in novelty, whether the variety be an outrage against good taste or not. The varieties shown tell their own tale. Etna is one of the best of all the Phloxes, its flowers rich, decided and well shaped, borne, too, in dense heads, which in the sunshine of a summer or early autumn day are as brilliant as the gaudiest Pelargonium.

Amongst the earlier flowering Phloxes we may mention a few of the best as a guide to those who intend to grow this perennial. A fine white is Avalanche. This is the variety that stands out amongst all others in the large collection of Phloxes in the Chiswick Gardens of the Royal Horticultural Society, and is worth planting to get the effect of the surface of white blossom; it is not tall, but strong in growth and exceptionally free. Purest of All is also a good white, and to go to the other extreme we get rich carmine-red colouring in a variety named Magnet, which, like Avalanche, is dwarf in growth. A rather tall kind, the habit of growth quite branching, is Lafayette, the flowers mauve, with a tinge of blush, set off by a rose-coloured eye. It is not poor in colour, as perhaps the description of the shades would suggest. Other good varieties are G. W. Collock, crimson, plant compact in habit; John Anderson, rich rose; John Forbes, rosy pink; Earl of Mar, rich crimson self; Albert Crousse, vermilion; Alice Henderson, delicate rose, and W. Robinson, the best of all herbaceous Phloxes, its colour a delicate salmon-rose tint. One of the best of the delicate lilac-tinted kinds is Eugène Danzanvilliers.

The herbaceous Phlox is not at all difficult to grow if the soil is made fairly rich, well dug, and rotten manure incorporated with it. The planter should remember it is a vigorous perennial, and, especially in very hot seasons, suffers greatly if the soil be poor and dry. Phloxes are not averse to moisture, and even when in quite moist places are perfectly happy, although on borders or in beds they succeed well, proving during the summer months among the showiest and finest features in the garden. A good way to propagate is by cuttings to get thoroughly sturdy plants, not relying, as is so often done, upon root-divisions, these being got from old worn-out plants, a mat of growth, the result of years' sojourn in the same spot. If to be divided, take the outer growths, which are strong, and not weak and starved, as those in the centre of the clump.

We hope herbaceous Phloxes will be taken in hand and made to contribute their quota of beauty to the garden in the summer months. They are, in their many lovely gradations of colour, little known, though familiar in the borders, where they are often shown in a formal, false way.



A white Phlox.

Euadenia eminens.—There are few stove plants which combine to a greater degree than this the qualities of beauty and interest. Whilst it is not one, perhaps, to be recommended to the gardener who has little or no room for plants other than those which will supply cut flowers or serve for room decoration, it is, on the other hand, an exceptionally valuable one where it can be allotted permanent quarters in a tropical house. There are many stove houses throughout the country whose interest would be enhanced by the addition of this and similar things. Euadenia eminens is a native of Tropical Africa, and was first introduced and flowered by Mr. Bull, of Chelsea, about fifteen years ago. The leaves are trifoliate and quite smooth, the three divisions being of pointed, oblong shape. The inflorescence is terminal, [illegible] composed of numerous flowers standing [illegible] the main axis. The corolla is made [illegible] four petals, the two upper ones of which [illegible] erect, and are at least 4 inches long, broad [illegible] at the apex, but narrowing below to a long slender stalk; the two lower ones are not half the length of the upper ones. The colour is a soft sulphur-yellow. Sir Joseph Hooker compares the inflorescence to a candelabrum, the large yellow petals mentioned above resembling a pair of gas jets. This species was first discovered by Gustav Mann, near the Bagroo River in 1861.

The Week's Work.

FRUIT HOUSES.

Fruiting Pines.—The grower will now be preparing to start a few early plants to fruit in May or early June. To get good fruit at the time named, it is advisable to make a start early in January. Much, of course, depends upon the means at command, plants with abundance of roots and a sturdy growth being required for the purpose named. Those who grow Pines largely often select their best Queens in the autumn and stand them together, having regard to those which are well rooted and with well-balanced leaves, not coarse, thick centres, as often these latter when given more warmth make new leaf growth and fail to fruit freely. Plants with a deficiency of roots or loose at the collar are not good for the above purpose. Where strong plants are needing new surface material or are loose, it is well to give a surface dressing of good loam, to which has been added some bone-meal, well ramming the soil before plunging in the new bed for fruiting. When any large plants have by any means lost their roots, it is well to repot, if required to fruit early, giving a smaller pot than the one they have occupied. Remove a few of the lower leaves, and by placing deeper in the pots new roots will form from the stems if the plants are plunged in a brisk bottom-heat. Such plants will form a succession to the earliest fruiters. Plants that have been kept quiet for a time and dry at the roots will need a thorough soaking with tepid water. To get the moisture to permeate the ball, it is advisable to loosen the surface with a pointed stick previous to watering, giving the plants several doses in succession. At the start moisture must be sparingly applied, and drip is most injurious at this season of the year, so that in damping down the weather should be taken into account. The plants will require extra supplies as the days lengthen. The temperature for fruiting plants should be 65° to 70° at night, 5° to 10° higher by day, and in preference to hard firing in severe weather it is advisable to cover the glass outside with some protecting material. I find dressed covers very serviceable for low pits or frames. Very little air will be required during the day, as the warmth from sun-heat through January will stimulate growth. It is well to admit a little fresh air daily about mid-day to sweeten the atmosphere and prevent drip.

Bottom heat for fruiting Pines.—At this season the plants selected for fruiting at the time named require extra care at the roots, and as the warmth is often obtained from manure, leaves or fresh tan, great care is required that the plunging material does not become overheated. The season has been favourable for collecting the materials required. The difficulty with fresh manure is too violent heating, the result being loss of roots. Oak and Beech leaves are the best, and if a good depth can be given there will be a steady and lasting heat. I noted fresh tan, but do not advise it, as one cannot obtain a lasting heat. With leaves the roots are kept in a moist, sweet-growing condition. In making up new beds for fruiters it is well to cleanse the pits before adding the new leaves and to clear out old material that will not generate heat. By removing the old material such pests as woodlice are got rid of, and the drainage can be made perfect. In making new beds solidity

should be the chief point, and if manure is used it should be prepared previously and not used direct from the stables. For fruiters at this season the aim should be a steady and lasting heat, as shifting causes a check, so that a deep hotbed is necessary. The temperature should not fall below 80°, 5° higher being preferable to excite the plants into growth and form fruit. The plants should be as near the glass as possible, great care being taken in plunging, well ramming round each pot. As the plunging proceeds make as firm as possible to prevent heat escaping.

Succession plants.—These should now be moving steadily, as in their case the drying off will not have been practised. These remarks apply to plants not likely to fruit for some time. Strong plants likely to fruit in July or later will need to be kept cool for a time and drier at the roots. Such kinds as Cayenne and other late sorts will need to be kept quiet, though by this I do not mean that such plants should be kept quite dry. The temperature for these may be quite 10° lower than advised for fruiting plants. Late potted plants of the winter fruiters will need a liberal bottom-heat, damping down the house in bright weather. Avoid watering overhead, as too much moisture means poor roots and long leaves. Young plants in small pots will need less attention at this season, as being grown in a lower temperature they will not become dry at the roots so readily. Though I do not advise such plants to be kept inactive, it is not well to excite them much, as in a few weeks' time they will make a stronger growth if just kept going now with more warmth at starting later on. If the young stock get their bottom-heat from hot-water pipes, care must be taken they do not get too dry. Suckers on any old stools of winter fruiters should be kept growing freely on the parent plants for a little time to gain strength. Those taken off at potting time will make good material for next winter.

Figs in pots.—This is a good time to start plants for fruiting in May. Some growers start earlier, but get smaller crops in consequence, as the plants often make too much wood if forced very hard. Plants for forcing at this date will have been repotted or top-dressed in the autumn, and will now be ready. A bed of fresh leaves should be prepared and placed in position. A good depth—not less than 3 feet—should be given. The leaves give off a gentle moist heat and soften the buds, causing a free break. For pot plants very little moisture at first will be required if a thorough soaking is given when the trees are placed in the bed. Plants should be kept as near the glass as possible, and the bottom-heat should not exceed 80°. A night temperature of 55° to 60°, with 10° higher by day, will be ample, and if the bed should get too hot, it is advisable to loosen the plunging material round the pots for a short time till the heat has subsided.

Fig houses.—The trees in this house should now be pruned and cleaned if required to fruit early. Cleaning at this season I look upon as most important. I do not know of any fruit tree which breeds insects so soon as the Fig when under glass. Scale during the growing season is difficult to get rid of. One of the best insecticides for the purpose I named at p. 302, when advising the preparation of pot Figs for early forcing, and the same remarks apply with equal force to permanent trees. Much can be done to get the points of the new wood quite clean by using a soft brush, and in the case of the old wood the safest plan is to paint all portions of the trees. Pruning Figs is often left too late. There is no need to delay the work. If deferred, the embryo Figs at the points of the shoots are often swelling. Any root-pruning or top-dressing may now be done. In most cases Figs bear so freely that rich surface-dressings are not required. In pruning it is well to cut away freely to give well-ripened, new wood room to develop, crowding meaning small fruits and rusty foliage. In pruning remove all sucker growths, if any of the latter are not needed to run up for extension.

Gross Fig trees.—It is not uncommon to see large trees a mass of wood if the roots have unlimited root-run, and now is a good time to take measures to prevent such gross wood. There need be no fear of evil results following root-pruning if the trees are well furnished with good fibrous roots. In cutting gross roots of long standing it is well to keep at a good distance from the stem, to fill in the trench with a compost of loam, coarse mortar rubble, and wood ashes or burnt garden refuse. This will induce short-jointed wood and abundance of fruit. One of the worst sinners as regards grossness is the Negro Largo. If the roots of this Fig can be confined to a small space it is one of our very best kinds.

Keeping Grapes.—So far the season has been fairly good for late-hanging Grapes. It will be advisable to go over the bunches at least once a week, removing any decaying berries, also dead leaves, as these restrict light and air. During damp weather a free circulation of air will be necessary on the top ventilators, with a little warmth in the hot-water pipes. The temperature should not fall below 45°, and avoid much firing at night to keep up the desired warmth, it being best to have the pipes warm at dusk. The borders, if outside, will need protection to throw off heavy rains or snow, a cheap cover being galvanised corrugated shutters, which are readily fixed, and last many years. Failing these, I have used dry Bracken or boards. Houses in which plants requiring moisture are wintered may with advantage be cleared of the fruit left. These will keep much better in a dry, cool room in bottles.

G. Wythes.

KITCHEN GARDEN.

Covering Seakale.—Some gardeners still rely upon the old method of open-air forcing, believing that although a trifle later in reaching a cutting size, the quality is much better. On the latter point I will not differ with them, as doubtless the even temperature which is maintained by the compressed leaves, coupled with the vegetable ammonia rising from them, has the effect of imparting both solidity and flavour. Where, however, it is wanted as early as possible forcing yearling roots indoors must be resorted to. The first batches are not starting into growth so freely and rapidly as usual, this doubtless being the result of the unseasonable heat during September, a time when early planted Seakale ought to be taking on an autumn tint. Rain fell just before the great heat, which made matters worse, and I quite expect old permanent beds will come away more stoutly than usual. Of course, where the latter are depended on for the whole supply, the first lot of stools which have been rested for two years will have been covered some time since, and advantage should be taken of the present open weather to place pots and leaves over a second lot. Should the leaves be wet it will be well to procure more from park or woods in a dry state, afterwards mixing the two in equal quantities, or if compelled to use saturated ones do not tread very firmly, rather waiting a week or two, and after settling, add more to the top of the pots, as wet leaves will if trodden sometimes heat to an injurious extent even if only of moderate depth. Where stable litter has to be used in part, do not exceed the proportion of one-fourth of it to three-fourths of leaves. Thrust a testing stick into the bed as soon as made up, examining it occasionally until the heat has reached its maximum. Any being forced in the Mushroom house should be cut as soon as ready, and if not wanted for immediate use placed in damp Moss in pans in a cool, dark place. Moss is preferable to water for inserting the stems in. If the space is not wanted at once for more roots the old ones may be left for a fortnight longer, as the secondary growth issuing therefrom is always useful for mixed vegetable soups.

Covering Celery.—In some gardens, where the depth of soil is limited, a sufficiency of it cannot be banked against the rows when earthed up, consequently, should the weather set in wet and severe frost follow, the Celery is often frozen through, and if a sudden thaw takes place, wholesale decay follows. In such gardens the preparation of protecting material should not be unduly postponed, indeed, the best plan is to cover at once a good length of ridge with Bracken or long litter, allowing it to fall down over the sides. This is most needful with the earlier white varieties, which soon succumb during a combination of wet and frost. As soon as the supply which was laid in the root room in November is nearly exhausted renew it with a few dozen more heads, as it is always advantageous to be able to draw a supply from this source for a time, should a sudden and unexpected fall of snow occur. When trimming Celery for the pantry, take off all the inner portion that surrounds the heart, as none but the actual centre is sent to the dining-room, and the trimmings, if kept back by the man in charge of the vegetable department, may be used in the kitchen for all ordinary purposes, and thus unnecessary raids on the supply be avoided.

Improving bad soils.—An open winter always affords opportunity, not only for trenching and ridging all vacant plots, but also for taking in hand portions of the garden which are too strong and retentive of moisture, or are of such a nature that good clean Carrots, Beet or Parsnips cannot be produced in them. Very often the inexperienced make matters worse by bringing to the surface bad soil from the bottom. Where the subsoil is not clay, or approaching to it, this system may be adopted with advantage, but in strict moderation, a few inches only at a time being brought up, so that the frost and wind of an ordinary winter can pulverise and mellow it. This—in March or April, according to the time is ground is wanted—may be broken down and well forked into the ordinary soil, adding thereto at the same time a good percentage of burnt garden refuse, leaf-mould and the sweepings of walks and drives. Where, however, labour can be spared, by far the best method of increasing the depth of the rooting medium in gardens where the subsoil consists of clay is, first of all, to mark out a limited plot and to wheel all the good soil from it on to the adjoining one. Then dig out a foot or more of the inert soil from below, wheeling it into a large heap or heaps, and after forming large mounds by burning up any rough, useless wood which may happen to be on the premises, place thereon, piecemeal, the bad soil referred to, that it may become burnt through and its nature be entirely changed. In due course this may be spread out as thinly as possible, and allowed to lie for a month or six weeks, or, in fact, till sharp frosts occur, finally returning it layer for layer with the original soil to the site from whence it came, adding a good lot of lime or wood ashes, and, finally, trenching the whole, so as to effect a thorough incorporation. No attempt should be made to increase the depth where the subsoil consists of gravel, unless by entirely removing a portion of the latter and carting more fresh soil from a distance. Better by far let a shallow soil remain so—improving it by the addition of enriching materials—than bring up rubbish from beneath and so spoil the whole plot.

Preparing Onion ground.—An early preparation of the plot intended for spring Onions is always advisable from a two fold point of view; first, in order to allow of a thorough settlement of the ground by the time the seedlings are rooting freely, and secondly, to avoid treading on the ground in spring, when, after repeated rains, and perhaps snow, it is often in a very sticky condition. To grow heavy crops of Onions the old mode of trenching is not the best, as in this case the manure is buried so deeply that it is a considerable time before the young rootlets reach it; whereas they require support from the very first. The plan I advise is to take out first of all a deep, wide trench at one end of the plot, wheeling the material to the opposite end. Then lay over the whole surface a good thickness of the richest manure procurable—pig manure is unsurpassed for Onion crops—adding a good proportion of soot and wood ashes, then throw the soil forward into the trench piecemeal, well mixing the

above-named ingredients as the work proceeds. By this means an equal mixture is secured from the top to the bottom, and the roots get the benefit of food from their first formation. Unless on clayey soils, I would recommend that the plot be well trodden as soon as digging is completed, as Onions cannot well have too solid a rooting medium, then retreading can take place previous to sowing in February or March. The same preparation may be given to ground intended either for sowing or transplanting Leeks on.

Seed list.—It is always best to make out seed lists in good time, so that the order may be sent into the seedsman. This is but fair, as the neglect of gardeners in this matter results in overwhelming pressure and much extra work amongst employees in seed warehouses in spring. Moreover, as the general rule is, that the first to come be first served; gardeners certainly stand a better chance of getting satisfaction than when the orders are not sent in till February or March. Taking it for granted that every good gardener keeps a reference, this will make the task of writing out the seed list a comparatively easy one. It is a good way to have a rough plan of the kitchen garden, with the various quarters and borders marked with the crops which grew in them during the past season. One can then see at a glance how to sow so as to give each subject a change of ground, and can, in preparing each plot, add or withhold manure accordingly. Novelties should only be tried in small quantities, more being grown the second year if satisfactory. To occupy much ground with these untried strains of vegetables is unwise, as it often means a falling off in the supply just at the time when it is most needed. Especially is this the case where ground is not over plentiful. J. Crawford.

Kitchen Garden.

MUSHROOMS FAILING.

Can any of your readers inform me as to the reason why Mushrooms on the top shelf of my Mushroom house damp off soon after they appear above ground? The house has a sloping roof and path down the centre, with three shelves on one side and two on the other. It is heated with hot-water pipes and kept at a uniform temperature of 60°. The roof is boarded, felted and slated. Would ventilation be advisable and to what extent?—S. B. P.

*** Most probably this failure of Mushrooms to succeed well on the top shelf in "S. B. P.'s" house is due to high temperature coupled, it may be, with heavy daily syringings. After reading "S. B. P.'s" particularly well-framed query, I ought not perhaps to take it for granted that the syringe has been used to excess, but, according to my experience, it is the usual accompaniment of high temperatures, an excess of fire-heat being liable to unduly dry the atmosphere. I have long been of opinion that a temperature ranging from 50° to 55° and the employment of as little fire-heat as possible is most conducive to success, the quality as well as quantity of crop being improved by this lowering of the temperature from 60° or thereabouts. It should be remembered that if the thermometer stands at 60° 3 feet or rather more from the floor, it will be 3° or more higher near the roof. Ventilation would only aggravate the evil, Mushrooms succeeding best in a genial, equable temperature, currents of either cold or dry air checking their growth surprisingly. Mushroom houses ought to be so constructed and sheltered as to quite obviate the necessity for turning on fire-heat other than during the prevalence of severe frosts, and it is not indispensable then unless the supply of Mushrooms must be constant. I have had beds frozen hard, yet these in the following March gave exceptionally heavy crops. At Longleat, Wilts, there is a large and somewhat exposed Mushroom house that those responsible could do nothing with till the sides and roofs were very heavily thatched with straw and reeds. Thanks to the latter protection, Mushrooms have been a success in this house ever since or for the past fifteen years. It ought to be borne in mind that what obviates the use of fire-heat to excess is also calculated to keep down the temperature during the hotter parts of the year, so that it is possible to have good Mushrooms out of a thatched house during nine months in the year. Successional beds formed in these sunny houses will usually keep up the temperature sufficiently high without drying up the atmosphere, and this fact must not be overlooked by those who decide to see what can be done without so much fire-heat. I have had excellent crops of Mushrooms from beds in a house where the syringe was never used, and no water given to the beds till the first crop had been pulled. The manure ought not to be put together till the rank heat has been got rid of by turning and fermentation, beds that over-heat becoming so dry that they cannot be re-moistened. Nor should it be very dry, as the Mushrooms can only be kept going by means of moist, slowly-decaying manure. Sometimes the beds become saturated and cold owing to being so often syringed; at other times the surface is wet and the manure underneath far too dry, the crops failing to reach a serviceable size, turning brown and softening in either case. Mulching the beds with soft, strawy litter serves to keep in the heat and moisture and protects from currents of cold air. In the Longleat Mushroom house wooden shutters fit closely over the beds and prove a good substitute for mulching. In either case no syringing is needed, but the beds should be watered if too dry to produce Mushrooms, or, say, six weeks after spawning (though more often than not this is found unnecessary), and again after a crop has been cleared off, when liquid manure, or water well impregnated with salt (warmed in either case), should be given in sufficient quantities through a rose to well moisten both the surface soil and manure underneath.—W. I.

Windsor Castle Potato.—For a main crop, this variety is one of the very best. It is of excellent cooking quality and yields a very heavy crop of fine tubers, that are nearly all of marketable size. During the past season I planted several plots of this variety, some of them quite early, some at what we call the best time, and some quite late, viz., the first week in June, and the last planting gave me the heaviest crop. The reason of these late-planted ones doing so well was that they escaped the severe drought that prevailed up to the latter part of July, and which caused the early planted crops to be somewhat lighter than they otherwise would have been. The late-planted crop grew away rapidly during the showery weather in August, and, thanks to another drought in September, ripened off well. I am now sorting them, and there are really no bad ones. Anyone having to supply a large quantity of first-class cooking Potatoes will do well to curtail the number of ordinary late sorts, and go in more largely for this genuine acquisition to main-crop sorts.—James Groom, *Gosport*.

Brussels Sprouts.—Like your correspondents G. Wythes and "J. C." (page 415), I am not altogether pleased with the behaviour of the Brussels Sprouts this year, for many of them are extremely leggy, ungainly, and lacking the solidity and firmness of sprout one likes to see and eat. In my case I think it cannot be through planting on soft, newly-dug ground, as the majority are in a quarter which was occupied by early Strawberries until the crop was gathered. The old plants and rubbish were at once cut over with a spade and cleared away, and so hard was the ground that the drills for planting had to be cut (both sides slanting) with a spade, similar to what surface drains on grass are cut. The ground was certainly softer under this crust, but too hard to work with trowels, so handforks had to be used for making the holes to receive the plants, which were good, transplanted stuff with nice balls of roots. I find this was done on June 6, and a thorough soaking of water given—being later than usual—waiting in hopes of the drought giving way. No farmyard manure was even applied to the previous crop (Strawberries), nor for years, in fact, not since the quarter has formed part of the garden; but artificial manures are freely applied during growth. Too early sowing might to some extent have brought about this state of things, for I sow rather early in boxes in very gentle heat, prick out into cold pits, and harden and plant out carefully. This is my usual custom, and generally the crop is satisfactory, so I fear we have to look elsewhere for the cause. As to the variety Paragon, I am at one with Mr. Wythes, for I also consider it the best in regard to growth and quality, but find the sprouts of Paris Market and Sutton's Dwarf Gem are rather too small on our light, hungry soil. This is not, however, an unpardonable fault in these days of over-large and coarse varieties of strong flavour. The Imported Aigburth and the like I have discarded some years since.—J. R.

Forcing Asparagus.—Those who require Asparagus in quantity and are unable to grow their own plants are placed in an awkward position, as, so far as my experience goes, there is great difficulty in purchasing forcing Asparagus worth the name. I admit there is no lack of plants for sale, in fact there are too many. I am aware the growing of Asparagus for forcing is costly, owing to the time occupied by the crop. On the other hand, the price asked is a big one. In my case the results are very poor indeed. I may be told it is owing to hard forcing or other defects, but such is not the case, as home-grown roots are vastly superior, and I shall in future resort to such for early forced material. I purchased more roots than usual, having a greater demand for forced Asparagus in December, and not wishing to destroy a large number of good roots. Others may be more fortunate in having obtained good roots for forcing, but for three seasons roots purchased from various sources have been an utter failure.—S. M.

Protecting spring Cabbage.—Now is a good time to go over the quarters where spring Cabbages are growing. My system at this date (the first week in December) is to select a dry day and thoroughly tread the soil on each side of the plants, afterwards moulding up well to the lower leaves, not leaving any portion of the stem exposed, as this is the part soonest injured. The treading, especially in light soil, keeps the plants firm, and also causes a more sturdy growth should mild weather continue. For the past half-dozen winters by following out the above plan I have not lost one plant in a hundred either from frost or running. If the lower leaves can be saved there is a great gain as regards earliness.—G. W.

Seed Potatoes.—At this season much can be done to get seed Potatoes ready for planting, as, if allowed to lie in bulk, the strong shoots are lost and the later breaks are more numerous, but less strong. I find it an excellent plan to now select all the tubers for early work and lay in shallow boxes, the small end upwards, placing the tubers close together in the boxes. It often happens that seed boxes or other shallow boxes can be spared for this purpose, and by preparing now valuable time is saved in the spring. The tubers should be freely exposed to light and air after being placed in the trays. The sprouts which form will be strong and much superior in every way to those from tubers in heaps or at all crowded in the store. Of course these remarks also apply to later kinds, but room cannot always be found for them, and it is well to store these very thinly on shelves if boxes are not available.—S. H. B.

Wireworm in gardens.—This pest is difficult to get rid of in old gardens if measures are not taken at this season to exterminate the pest. I have tried various remedies and find none so effectual as gas-lime. I admit it requires care in its application. Not only for wireworm is the lime efficacious, but for clubbing in the Brassicas there is no better remedy. When the lime is used in large quantities direct from the gasworks it is injurious, but if spread thinly on the surface and

dug in, it is a grand fertiliser. When fresh the lime is very lumpy, and before being dug in it should be finely broken. For land not badly infested, only a slight dressing is needed, but where clubbing is prevalent I have used the lime at the rate of a bushel to the square rod, allowing it to lie for a few days before digging it in. By using lime in moderate quantities at this season the pest is warded off. Old garden soil will greatly benefit by such dressings, as worms, slugs and other pests are got rid of. Soot is a good fertiliser, but does not clear off the pests. For spring dressing soot is excellent.—G. W.



Phalænopsis Schilleriana.

Failure of Spinach.—Spinach has fared badly with me, and unless extra measures are taken to provide the spring supply, I fear the return from autumn sowings will be poor. I regret this failure, it being the first for many years. A good breadth of Spinach in March and April, when there are none too many green vegetables, is much appreciated. I notice that Spinach has failed with Mr. Tallack (p. 415) in quite a different part of the country, so I conclude it is pretty general. The September sowing will, I think, pull through; the earlier or what is termed the winter crop will shortly be dug in, as it is past recovery. Doubtless the dry season at sowing time is to blame for the loss of plants. It is not caused by insect pests, as I am most careful to prepare the land for this crop, and in all cases give a new quarter and well dress with soot, wood ashes and lime. I have not seen any good breadths of this vegetable in market gardens. Some may think the failure is owing to the variety, but such is not the case, as I have seen failures from both old and newer kinds. This is the first time the Victoria has failed with me. I do not advise sowing in heat, as the plants do not always take kindly to the soil when planted out. I have found it best to sow in 4½-inch pots early in the year in cold frames just frost-proof, allowing four to six plants in a pot. By the end of February the plants should be set out on a warm border and protected with a little Bracken or cut branches. These will give a fair supply in advance of the plants raised in the open ground in the early spring.—G. Wythes.

Orchids.

PHALÆNOPSIS.

In my occasional notes on the culture of these beautiful plants throughout the year just closing I have endeavoured to show as plainly as possible the varying treatment required at different times. It is only by carefully noting the progress of the plants month by month, and altering the temperatures and other cultural details as these become necessary, that the best results can be obtained by beginners. But it must always be remembered that information of this kind must not be taken too literally, and the advice given by an outsider must always be qualified by existing individual circumstances. As an instance, take shading. Plants growing in a steep-pitched, narrow house will be usually found to require more than others of the same species in a flatter and wider structure with a greater atmospheric capacity. The reason for this is obvious. In the latter house more ventilation can be given, the lights being opened wider and kept open longer in the day, a large body of air not being so liable to fluctuations. This being so, the leaves, although at the same distance from the roof glass, will be kept cool until later in the day. I have purposely refrained from giving special times for ventilating, shading, or closing the houses for the same reason, position, aspect, and style of the houses making all the difference in this respect. Another point requiring attention is the way the changes of temperature referred to are brought about. There must be no sudden rise or fall, but so gradual as to be hardly perceptible, and always corresponding with outside conditions as far as possible. Seasons vary greatly, and although, of course, we do not follow them exactly, yet the climatic conditions have an indirect bearing upon all details of Orchid culture. If this were not so the majority of the exotic species would be resting during the hottest, and therefore driest, months in the year and growing through the winter, the absurdity of which is clear to anyone. There is no need to recapitulate the various points of culture referred to in past notes, such as atmospheric and root moisture, for any thinking person must see that the same argument applies to all, but a short description of some of the better-known and easily grown species may be helpful to anyone making a selection of these magnificent Orchids. The oldest and perhaps the best known in the genus is

P. amabilis, a very free-blooming and handsome Orchid. This has thick, lanceolate, deep green leaves, from the axils of which the large branching racemes of flowers spring. These are 3 inches across, the sepals and petals pure white. The lip is three-lobed and very beautiful in structure. The ground colour of this is white, but there are numerous red and yellow spots near the column. The flowers are produced at various times all through the spring and summer, and last a long time in perfection. It is a native of Java, and first flowered in this country in 1838, having been introduced about two years previously.

P. Esmeralda bears much smaller flowers upon an erect spike, these seldom exceeding three-quarters of an inch in diameter. The leaves are small and light green, sparsely spotted with brown. The colour of the flowers is rosy purple, the lip being darker than the sepals and petals. Some varieties are much darker than others. A native of Cochin China.

P. grandiflora is very like amabilis, but larger in all its parts and slightly different in colour of the lip. It has been suggested as a variety of P. amabilis, but is certainly deserving of specific rank. It was introduced from Borneo in 1847, and is fortunately a cheap and fairly plentiful species.

P. intermedia is rarer. It is a beautiful kind, supposed to be a natural hybrid between P. amabilis and P. rosea. It resembles the former in habit and the flowers are somewhat similar in shape, but smaller. The sepals and petals are white, the latter with a few rosy purple spots about the base. The lip is three-lobed, the central one crimson, the side lobes purple. This is also known as P. Lobbi, and is a variable kind, introduced from the Philippines in 1867.



Phalænopsis amabilis.

P. Luddemanniana has stiff-looking leaves, about 6 inches in length and dark green. The flowers are 2 inches across, the sepals and petals white, distinctly and prettily marked with brown

and violet-purple. The lip is purple, the central lobe being darker than the side ones. This has been in cultivation since 1867, and is also a native of the Philippine Islands, as is

P. Schilleriana, the most easily cultivated of all and a lovely species, the leaves being very handsomely marked. The flower-spikes are long and much-branched, the individual blooms being from 2 inches to 3½ inches in diameter. The sepals and petals are light rose, shading to white at the margin, the lip three-lobed, the centre lobe lighter than the side ones and having a yellow centre and many bright red spots.

P. Stuartiana somewhat resembles the last-named in growth, but the markings on the foliage are not so constant. The flowers are each 2 inches across, the sepals being creamy white, spotted with red at the base, the upper portion pure white. The petals and also the lip are white, the latter being spotted with red. A native of the Philippines, introduced in 1881.

Dendrobium chrysanthum.—It is rather late for this to be in bloom, but I recently noticed a fine piece, profusely flowered, in a group of plants at a local show. This plant, unfortunately, was tied up to stakes placed in the pot, so that the natural pendulous habit could not be seen. This greatly mars the beauty of the pendulous kinds, nor do they thrive so well when tied as when growing naturally. The worst fault of D. chrysanthum is the evanescent character of the flowers, for they are bright and effective in colouring and have the additional advantage of being sweetly scented.—H. R.

Cœlogyne barbata.—If we except the well-known C. cristata this can hardly be styled a popular genus, although it contains many fine garden Orchids. C. barbata is one of these—a robust, healthy-growing species, constant in flowering and by no means devoid of beauty. The blossoms are produced on erect scapes, each bearing about six or eight flowers, which are each upwards of 2 inches across and of good substance. The petals, sepals and lip are all pure white, the latter being ornamented with a crest of reddish brown hairs, giving it a very distinct appearance. C. barbata may be grown either in the cool house or with the Cattleyas in a good light, but screened from bright sunshine. The compost best suited to its requirements is equal parts of peat, Sphagnum Moss and partly decayed leaf-mould, using with this plenty of crocks and charcoal to ensure aëration. The plants should be potted soon after flowering, not disturbing the roots more than can be avoided. When established in the new pots and all through the growing season plenty of water will be needed, and the atmosphere also must be well charged with moisture, but after the growth is finished much less will suffice. It is a native of Northern India, introduced in 1837.

Odontoglossum gloriosum.—Although many of the varieties of this species are weedy and ineffective in colour, some are really fine Orchids, but the best of them cannot be described as first-class. It is often imported for O. crispum, but is of course perfectly distinct. A pretty type I noted recently was of the palest creamy yellow, the many spots having a purplish tint in place of the usual dull brownish-red, the contrast being very effective, not only on account of its freedom of blooming and easy culture, but also the pleasant perfume of the flowers. This deserves a place in all collections. It does well under the coolest treatment and likes plenty of water all the year round.—R.

Brassavola glauca.—Well flowered plants of this Orchid are very attractive, the pure white lip being the showiest part of the flower, which is produced from the apex of the current year's growth after the manner of a Cattleya Trianæ. It is a species that delights in a strong moist heat provided there is a good circulation of air, and the plants need only be screened from the brightest sunshine. It may be grown in baskets or in pots and must only have a thin surfacing of compost made up of the best peat fibre and Sphagnum in the proportion of two of the latter to one of peat. Some rough lumps of charcoal may be mixed with this, and in potting or basketing the plants the material must be made firm about the roots. Plenty of water must be given while the growth is active, and though this must be decreased when at rest, at no time must the plants be really dry at the root.

Odontoglossum Humeanum.—This pretty Orchid is now in flower, the spikes being much earlier than usual. A plant with about ten bulbs has produced three spikes, thus showing its free-flowering nature, as two only are leads. The plant thrives well with the other species. The flowers are like those of a good form of O. Rossi in shape, the sepals lemon-yellow, and the petals white, variously blotched with brown. It is a rather uncommon plant and is supposed to be of hybrid origin, the suggested parents being O. Rossi and O. cordatum.

Odontoglossum Edwardi.—This plant is now in bloom, the number of flowers being over eighty. Each blossom measures about an inch across, the sepals and petals being violet-purple, the lip similar, with a prominent yellow crest. O. Edwardi is a free-growing, vigorous species from Ecuador, whence it was introduced about fifteen years ago. The best place for it is a light position in the cool house, closely shaded during the summer, but in winter it should have a temperature of about 55°, as the flowers do not open well in quite a cool house. The compost for this kind may with advantage be used in rather a rougher condition than that for O. crispum and its allies. The pots, too, may be rather larger in comparison with the size of the plants. Its growing season should be from the new year onwards until late in the autumn, but it is rather an erratic species in this respect, the plant referred to above not having made a move for nearly three years, but it is now showing a strong and vigorous new shoot. A peculiarity of O. Edwardi is that some plants produce flowers that are sweetly scented, while others are quite odourless. It is perfectly distinct from all other Odontoglots, and its colour is not usual in any genus of Orchids.

NOTES ON CATTLEYAS.

By far the greater number of this popular genus are easily cultivated—that is to say, there is nothing particularly difficult as long as they are kept to their proper routine of growth. But unremitting attention they must have if the cultivator is to be successful, for, unlike many Orchids, they are extremely difficult to bring round if they get into an unhealthy condition. Bearing this in mind, careful growers watch their plants narrowly and always endeavour to anticipate their wants, and by these means keep them healthy. At this season the growth of most of the plants is at its lowest ebb, very few of the better-known kinds making any growth during the winter. But it does not follow that therefore they need nothing done to them; on the contrary, there is usually plenty of work to be found amongst them. Cleaning is of course a perennial trouble, and must be pushed on with every opportunity, for although the plants look clean, there are often insects lurking about them unseen. It is a good time now to look over the plants and renew the stakes where necessary, and a little more care than is generally taken with this part of their culture would be well repaid by the improved appearance of the plant. Small and medium-sized specimens, or, say, those in pots up to about 6 inches across, should have a strong, but neat stake in as near the centre of each as it is possible to get it, and the pseudo-bulbs may be looped up to this, disposing them as regularly as may be. The raffia or bast used for tying should be twisted up tightly in the fingers, as it looks much neater and stands a greater strain than if used flat. Tie it as low down the stake as may be, and cut off the top of the latter so that it does not show above the top of the plant. Larger specimens will require more stakes, which must be inserted carefully between the roots, and a thin strand of matting should be passed around the pseudo-bulbs with a running knot to each, thus securing them in any position required. Plants only partly established of course require greater care in tying, as, not having many roots, there is nothing but the stakes to steady the pseudo-bulbs. Among those advancing into flower are C. Trianæ, C. Percivaliana, C. amethystoglossa, C. chocoensis, C. Skinneri and a few others, and these may be placed in the sunniest position. They will not require much water at the root as yet, but as soon as the buds break through the sheath, the supply may with advantage be slightly increased. It is very important that when the plants are watered, enough be given to soak the whole of the contents of the pot, as this lasts for some time and prevents wetting the base of the pseudo-bulbs so often. After the turn of the year more damping will have to be resorted to between the pots, especially should severe weather render the use of more fire-heat necessary.

Mesospinidium sanguineum.—The elegant drooping racemes of this pretty little Orchid make a welcome bit of colour in the cool house, the soft rosy tint and the fleshy appearance of the flowers being very distinct and attractive. In habit this species resembles Oncidium ornithorrhynchum, but is smaller in all its parts. Newly-imported plants should be grown for the first season in the Cattleya house, as the pseudo-bulbs are always larger than if grown in the cool house. Afterwards the cool house suits it best, as the plants soon get overrun with insects if grown in much heat. They may be placed in baskets or small suspended pans, or they will thrive equally well in pots, but in the former the pendent spikes are shown to better advantage. Not much material is required about the roots, as these are not very vigorous; therefore the receptacles for them must only be large enough to take the plants easily. Good peat fibre and Sphagnum Moss in equal proportions, with enough crocks or charcoal to ensure porosity, will be a suitable compost, and this must be firmly bedded about the roots. Plenty of moisture is needed both at the roots and in the atmosphere, and as the plants are subject to the attacks of thrips, frequent dewings overhead are beneficial during hot sunny weather.

Oncidium crispum.—This species is a native of the Organ Mountains in Brazil, and was introduced into Europe as long ago as 1830. In spite of the many later introductions, it still remains one of the very best of autumn-flowering Oncids. There are at the present time several large specimens finely in bloom in the Orchid house at Kew. Some of the pseudo-bulbs are 4 inches high and 2½ inches across, the flattened sides being curiously ribbed. Each of the newer ones is surmounted by a pair of leaves, the largest of which are 10 inches to 15 inches long, very stiff in texture, and of a deep olive green. The flower-spikes are 2 feet to 2½ feet high, branching, and bearing from twenty to forty flowers. The flower is 2½ inches across, and chiefly of a rich reddish brown; a patch of yellow occurs on the centre of the lip and a thin marginal line of yellow also runs round each sepal and petal. Many of the Oncidiums are rather difficult to keep in health for long after importation. Fortunately O. crispum is not one of these, but, on the other hand, it is one of the most amenable to cultivation. It does not require any very large amount of compost to root into, and may very well be grown on Teak rafts or in shallow baskets. It enjoys an intermediate temperature and should always be kept moist, more especially so, of course, when in active growth. It likes plenty of light, and may consequently be conveniently grown along with the Cattleyas.—P.

Colour in bark.—At this season of the year anything which gives colour in gardens, whether as shrubs or trees, is very welcome. Some of the Willow family have very bright yellow growths, and where obtained from hard cut-back stems

or shoots in bunches they are very pleasing. One of the reddest-wooded of the family is Salix vitellina Britzensis, which just now furnishes a bright, pleasing contrast to the yellow-wooded forms. I saw this the other day at Coombe Wood, and, more striking still, perhaps, the reddest-stemmed of all shrubs, Cornus atrosanguinea. The plants had been hard cut back the previous spring, and had thrown up shoots some 3 feet long, almost blood-red in colour. This, grown and treated as a compact shrub to produce clusters of growths in this way for winter colouring, would be effective indeed. No doubt there are many other hardy shrubs that might be similarly treated to secure like effects.—A. D.

Flower Garden.

EPIMEDIUM LEAVES FOR CUTTING.

Among the many interesting and beautiful plants to be found in the outdoor garden during the winter months, fine healthy masses of Epimedium are sure to attract attention. Here we have a plant bold and graceful in its leaf growth, and not only hardy, but retaining its leaves with such persistency that they only begin to die away when another crop has arisen to replace them. It is a precious plant, capable of good use in association with other hardy winter evergreen perennials, as the Megaseas, Hellebores, Yuccas, Heucheras, and the many Rockfoils and Stonecrops, all lovely in colour. Not only in the outdoor garden, but inside as well, the leaves of the Epimediums will be found useful to arrange with flowers and spare the tenderer leafage. Though the frost may have been very severe, one will not visit the Epimedium tufts in vain to secure such leaves as those shown in the accompanying illustration, which so admirably portrays their outline and airy elegance poised upon thread-like stalks. The leaves generally are of a deep bronzy-green colour, but if a few plants are grown in a sunny spot at the foot of a wall or fence, they will take on delightful hues in autumn and retain them through the winter with all the leaf veins prominently delineated in deep bronze on a lighter ground. Epimedium alpinum and E. pinnatum are easily grown in any soil, and are pretty spring-flowering plants, but we should know them better and prize them more for their persistent leaf beauty, and use the leaves frequently, too, in floral arrangements. Old-established tufts throw up masses of leaves quite 2 feet high and the same in diameter. Established roots of the Epimediums make excellent subjects for forcing into flower in March and April. The plants should be kept in a cold frame until the end of January, when they may be placed in an intermediate house and stood on a shelf near the glass. If kept well supplied with water, the plants will come into bloom and the flowers will be found very useful for cutting.

A GARDEN OF HARDY FLOWERS.

In a garden of hardy plants there is ever springing into blossom some momentarily forgotten plant rendered all the more welcome because forgotten for the time. And so on, from the earliest spring-time till far away into the waning months of the year is there something interesting. Such a garden is a constant source of enjoyment as well as a veritable store-house of surprises, and its possessor is never without an abundant supply of flowers. All these facts have for years been known to Mrs. Fitzwygram, who has just such a garden of hardy flowers at her residence at Larkfield, Hampton Hill. It is by no means an elaborate garden, rather the reverse, where one finds a variety of beds and borders, all of simple design, filled to overflowing with choice hardy plants and bulbs. In size it is between one and two acres, and of this a portion is set apart for the growth of vegetables and the like, while the largest portion is reserved for the flower garden. For the most part the flower-beds are situated on the margin of the lawn, these being carefully separated one from the other by evergreen or flowering shrubs or trees. Very early in the year may be seen masses of colour in the Aubrietias, Arabis, and Forget-me-not, which are used in plenty for the margins, and later on in almost every available nook large masses of fragrant Pinks. The earlier bulbs, such as Crocuses and Snowdrops, are of course not forgotten, and may be seen in plenty fringing the shrubberies and similar places. Again, in grassy spots, quietly nestling at the foot of some tree or other such things, springs up year by year the winter Aconite, bearing them company. Much is made, too, in this garden of simple fragrant flowers, such as Stocks, Sweet Williams, Primroses, and Polyanthuses, and of the last a capital strain exists, notable for their vigour as well as their rich and varied colours and bold trusses. There is such a wealth of beauty in these flowers, that one wonders why they are not extensively employed in spring gardening, either alone or in company with some of the taller Tulips in masses of given colours. A somewhat exceptional experience in this garden is the great variety of Apple blossom in the shrubberies in spring-time. Originally planted with Poplars and other trees that sent their roots far and wide, robbing the soil as well as the flowers of the light and moisture they so much needed, their places are filled with the Apple trees, which in turn are both beautiful and useful. Apple trees are also planted here and there on the lawn, but only on the margin and at the furthest extremity. It is certain that a very pretty effect is produced here by their association with other things in the shrubbery. Space will not permit of the almost endless array of perennials that occupy the beds and borders, but among the most prominent are Irises, stately Delphiniums, Coreopsis and Phloxes of the herbaceous section as well as those of alpine habit. Many of the choicer Campanulas, such as grandis, carpathica alba, persicifolia alba (the last a capital plant and very useful, always creating a fine effect by the purity of its blossoms), Eucomis punctata, Montbretias, large established masses of the Alstrœmerias (which are very effective year by year and are never disturbed), Gaillardias, the Japan Anemones, Michaelmas Daisies, perennial Sunflowers in variety and such-like receive every encouragement. In the shrubbery are clumps of Polygonum cuspidatum, Bocconia cordata and similar things, while arches and festoons of Roses abound. Especially vigorous and successful are some of the climbing Roses, the variety Mme. Berard in particular being exceptionally strong, some of the leading shoots of this variety being more than an inch in diameter. A covered archway of this Rose has been quite a feature, with a rich profusion of its beautiful blossoms over a long season. There are many other Roses in this garden grown either as bushes or standards, many of the Hybrid Teas finding a congenial home in sheltered spots away from cutting winds and the like. As may naturally be expected, Carnations are especially valued, particularly the selfs and the more fragrant kinds. Apart from an assortment of border kinds, a strain of seedlings of Italian origin, I believe, has bloomed profusely all through the season, and quite late in September was still yielding many useful flowers.

Among useful climbing plants Clematises may be mentioned as well as the Everlasting Peas (Lathyrus latifolius), while the Sweet Peas and Canary Creeper are employed wherever a suitable opening offers. Quite 7 feet high and brilliant with blossom was a large hedgerow of Tropæolum tuberosum. E. J.



Foliage of Epimedium pinnatum in a bowl. Engraved for The Garden *from a photograph by Mr. J. C. Smith, Nandana, Penrith.*

NOTES ON HARDY PLANTS.

Gaultheria procumbens is a December rock garden plant beyond all praise, dwarf, bright, the evergreen foliage richly tinted with warm red-brown; berries big and brilliant, interspersed, as they are nearly the year round, with some of the pretty bell-shaped flowers of a soft flesh-white. We have indeed a maximum of good features in a creeper of whatever period, but all the more valuable in December, continuing in evidence all the winter. The plant can take care of itself in any peaty soil, but to have it do well it should have good living. This may be given in the form of an annual mulch of rotten leaf-mould and a little silver sand, and if a pinch of Peruvian guano is added all the better.

Vaccinium Vitis Idæa.—This is a capital companion to the above. The Box-like foliage at this time assumes a desirable bronzy hue and the bright scarlet berries are exceedingly pretty, but you only get a good show of the fruit on plants well cultivated, I think; anyhow that is my experience. The plant is rarely taller than 9 inches. Used as a rock plant it should have some vegetable soil and a moist position. I do not think there is much to be said for the name majus as applied to a supposed variety. I grew it and believed in both the plant and the name for a while, but, growing the type and it side by side, they became indistinguishable from one another. With good culture the type soon increases in size in all its parts except stature, the fruit especially becoming large, quite the size of ordinary Kentish Invicta Pea.

Polygala Chamæbuxus purpurea.—To complete a trio of evergreen creepers for winter effect in the rock garden I would add this to the foregoing. Just now its pale apple-green leaves are crowded with buds in all stages of development, and a few flowers are open, others come forward when there are a few fine days all through the winter, just as do the Periwinkles. This creeper seems fond of a marly loam if the position is moist, and it is a fact not, I believe, generally known that this purple-flowered form is much more robust in constitution and free flowering.

Ranunculus Macauleyi.—This is a small plant with big flowers, and, though a native of a warmer clime than ours, has proved at least hardy enough for a winter like 1894–95. Of course, its habitat must be a cold one at 1000 feet to 4000 feet. My experience of it is that it does not rest so completely in winter as we like to see all herbaceous alpines, the young leaves suffering from late autumn to spring. It flowers at a height of 6 inches to 8 inches in gardens. The golden cups are of a rich orange tint and distinctly veined; they can be just covered by a florin, and are sparsely produced in upright, stout stems. Generally in its somewhat glaucous foliage and habit it resembles R. amplexicaulis. The roots, too, are of the same order, stringy, and radiating from a well-defined crown.

Woodville, Kirkstall. J. Wood.

COLOURS IN FLOWERS.

At pages 371 and 450 some instances are given of genera which produce both yellow and blue flowers. I cannot admit that the Pansy is ever really blue enough to come into the category. I can, however, add another—Salvia glutinosa, a distinct, though a pale yellow.—Wm. Wickham.

—— In addition to the instances mentioned on p. 450, blue and yellow forms occur in the following families. I may remark that the blue in Polyanthus is not good; the yellows are good enough. We must go to the Primula species for good blues. Anemone, Clematis, Astragalus, Gilia, Lathyrus, Hyacinth, Aconitum, Baptisia, Brodiæa, Delphiniums, Billbergia, Verbena, Sisyrinchium, Scutellaria, Tropæolum, Statice, Teucrium, Tillandsia, Nymphæa, Myosotis, Oxytropis, Pentstemon, Vicia, Trichonema, Salvia, Polemonium, Campanula, Allium, Meconopsis, Ixia, Gentiana, Asterocephalus, Lithospermum, Moræa, Jacaranda, Muscari, Ceanothus, Crocus, Convolvulus, Ipomæa, Iris, and if you admit Linosyris, in Aster also. I have no doubt in many others.—T. Smith.

—— A little search would reveal many more families of plants with both yellow and blue flowers. Here are a few that occur offhand: Crocus, Hyacinth, Delphinium, Clematis, Polemonium, Muscari, Meconopsis, Iris, Anemone, Allium, Linum, Ipomæa, Sedum, Gentiana, and I have no doubt many others.—T. J. W., *Crouch End.*

—— The scientific committee of the Royal Horticultural Society are desirous of carrying out some experiments upon the effects of ingredients in the soil upon the colours of flowers. The secretary will be glad to receive any information about accidental or other results which florists or other cultivators have met with. Any references to published accounts of changes of colours in flowers will be thankfully received by Rev. G. Henslow, *Drayton House, Ealing.*

MARKET GARDEN NOTES.

Freesias.—The only way in which these can be made to yield a profitable return is to get them into bloom as early as possible, anticipating the large supplies of this flower from the Scilly Isles. These come to hand so early in the spring, that fair prices for Freesias cannot be relied on after February. By a proper system of culture one may have the plants well in bloom in December and January, and at that time the returns are sufficiently high to admit of a fair profit. It is not so easy to procure such an early bloom from imported bulbs as from those that have been forced for a couple of seasons. The earlier the bulbs start into growth the sooner will they go to rest. In an ordinary way the foliage dies off early in July, and the bulbs require at least a month's rest before they are repotted; whereas, for blooming at the close of the year they ought to be growing freely by the middle of August, so that they are throwing up their flower-spikes by the end of November. In a constant temperature of from 50° to 60° they will come into bloom by the close of December.

Daffodils.—It is with these as with Freesias; they must be in the market before the earliest supplies from the Scilly Isles reach us. For early work, obvallaris is one of the best; it forces well, is naturally very early, and being so firm in texture, does not suffer in travelling. Unfortunately, being one of those Daffodils that do not thrive and increase freely in many soils, it is dearer than the old double and princeps, both of which are admirable market varieties, force well and can be bought at very cheap rates. Spurius is a good market kind, one of the very earliest Daffodils, but not so bold in appearance as princeps. A high temperature must never be applied to Daffodils, but only enough warmth to keep them gently moving. For early supplies, about 1s. 6d. per dozen blooms may be obtained, but after the middle of February prices drop rapidly.

Chrysanthemums.—The prices for blooms produced by the rough-and-ready cultural method as practised generally in market gardens have probably reached their lowest point. Those who grow large quantities may be content with a very low profit per plant, but the small grower can scarcely find it worth his while to produce blooms for which he cannot obtain much more than 1s. 6d. per dozen good bunches. Those who have but a limited space that they wish to utilise to the best advantage in autumn or early winter would certainly do better to grow their plants in pots for the production of larger, well-formed blooms. Pot culture naturally necessitates the expenditure of a much greater amount of labour, and for this reason it is not taken up generally by those who wish to get something out of their glass houses at a time when otherwise they would be empty. Planting out is so easily done, the plants needing but little attention through the summer months, with but a bi-weekly watering when housed, that even at a low price a certain amount of profit may be reckoned on. This is not, however, the way to make the most of the space, which can only be utilised to the best advantage by growing blooms of superior quality. It is only specimen flowers that make good prices now, and these, of course, cannot be obtained except by means of pot culture.

Grapes.—Hitherto the Gros Colman has commanded much higher prices than other black Grapes, but those who have been planting this Grape to the exclusion of the Alicante and Hamburgh, or have been rooting up the latter to make room for its larger-berried rival, will have no great reason to rejoice in having done so. The comparatively high prices which the Gros Colman has made in the London markets will soon be a thing of the past, the probabilities being that they will range at this season at least but little higher than those obtained for the Alicante. Really good samples coming from some of the best Grape growers in the home counties have been selling in Covent Garden at about 1s. 6d. per lb., whilst good Hamburghs and Alicantes have made about 1s. per lb., extra good samples making 6d. per lb. more. When the numerous Vines of Colman that have been planted of late have come into full bearing, the difference in price will be still less. As a late-keeping Grape the Colman stands well above all other black varieties, and only those who let it hang until February can hope to gain much advantage from its culture. It is more expensive to grow than the Alicante, requiring a longer season to ripen in, and is, moreover, much more uncertain than that reliable variety. I fail, therefore, to see what advantage is to be gained by growing Gros Colman for a main supply, for even if it makes a little more, this advantage will be counterbalanced by the greater expense and uncertainty attending its culture. It is rather curious that Muscats, which made this year from 1s. 9d. to 2s. 6d. per lb., advanced in value at the beginning of November to 3s. and 3s. 6d. per lb. One would have thought that the past summer having been so favourable, Muscats would be more than usually good and plentiful. This Grape is undoubtedly still the best paying kind when it can be grown in really good form, but I fail to see what advantage there is in producing Muscats that make no more than a good sample of Hamburgh or Alicante.

J. C. B.

PUBLIC GARDENS.

CHRYSANTHEMUMS IN THE PARKS.

Finsbury Park.

The Chrysanthemum show properly so called at Finsbury Park is to be found in the old Chrysanthemum house close to the Manor House entrance to the park, a fact necessary to be mentioned because there are about a dozen showy groups of all sections of the popular favourite arranged with Palms, Ferns, and the like in the rather larger tropical house, which is a somewhat conspicuous building. The main collection consists of about 2000 plants, and they are placed in a wide, low span-roofed glass structure admirably suited for their reception and about 100 feet in length. A single bank runs down the middle of the house with a slope each way and a path right round the sides of the house. The colours are very bright and attractive in this northern park, but white and yellow appear to predominate. Along the front of the bank of colour a row or edging of pretty little bush-grown pompons is arranged, which helps to lend an artistic feature to the display, which may also be seen at some of the other public exhibitions in the parks. Novelties are not the great feature in the parks, but good old standard sorts and a fair sprinkling of the new introductions may be found here as elsewhere. Etoile de Lyon, large and fine; Col. W. B. Smith, very rich in colour; La Triomphante, also large; Florence Davis, the pretty golden bronze Source d'Or, and the deep rich crimson G. W. Childs are grown in quantity. For a dwarf front row plant

the pale pink Mlle. Mélanie Fabre is usefully employed, and at intervals very freely grown plants carrying a large number of blooms of M. Chas. Hubert and Ile des Plaisirs are judiciously interspersed. White Japanese of good form and size are numerous. Old Elaine is a valuable variety; Avalanche, Mlle. Marie Hoste, Stanstead White, Viscountess Hambledon, Eynsford White, Mme. Isaac, Marquis de Paris, M. Astorg, &c., will tell their own tale. Good yellow varieties of the same section are represented by many fine blooms of Golden Gate, very deep and pure in tone; Sunflower, J. S. Dibbins, Admiral Symonds, a fine single-flowered Japanese, pure golden yellow and having very long florets; Gorgeous, Mr. C. E. Shea, the pale yellow sport from Mlle. Lacroix; old Peter the Great, Curiosity, once a popular show variety; J. H. Runchman, a fine deep golden yellow Japanese incurved, globular and solid, and only brought out about two years ago. Others, like Viviand Morel, its rosy bronze sport Charles Davis, Comte de Germiny, Prest. Borel, Edouard Audiguier, very rich purple-amaranth; Margot, Mrs. C. Harman-Payne, William Seward, Louise, M. Bernard in their various shades of colour all help to enliven the display, and are good in size and in purity of tint. Philadelphia here, as everywhere else, is of a pale sulphur tint and by no means imposing; Good Gracious, with its curiously twisted tubular florets, is very large, and Jeanne Délaux, a deep dark crimson variety, with narrow florets, never wanting at the shows ten or twelve years ago, still proves valuable from a decorative point of view. Shasta is novel in appearance; it has very fine tubular, erect florets, and of course is a Japanese, as such curiosities always are. Sarah Owen; Violet Rose; an old friend, The Cossack; International, always large, coarse, and varying in colour; Mlle. Lacroix, Duke of York, W. Tricker, and many more well-known varieties, both ancient and modern, are all represented. If the collection comprises so many of the Japanese, it must not be inferred that other sections are neglected. Incurved are grown in profusion, and a fair sprinkling of the Anemone section also lend a special interest to the group. These are placed at intervals and all the varieties are neatly labelled, which seems to be much appreciated by many of the visitors. The Rundles and Queens need no mention, for they are always easily recognised; so, too, are the Beverleys. Baron Hirsch, M. R. Bahuant, Prince of Wales, Guernsey Nugget, Jardin des Plantes, Barbara, Refulgens, and standard incurved of that type are all well done, and although somewhat stiff and formal compared with their rivals, the Japanese, are none the less interesting when seen in large mixed collections like those provided by the London County Council. In the reflexed section, Dr. Sharpe and Cullingfordi are the most noteworthy, and, with the exception of Louis Boehmer and Hairy Wonder, the hairy section do not seem to make much of a show, as they do at Southwark. Anemones are capitally grown, and all of them show well-developed centres, upon which the beauty of that section, whether of the old Chinese or the more modern Japanese type, so much depends. A faulty centre is a defect not to be looked over in these neat and attractive varieties. Descartes, a Japanese Anemone of large size, having long ray florets and the colour deep velvety vinous-crimson, is very fine. Judge Benedict, pale yellow centre, with white or blush ray florets; Delaware, white and yellow; M. Charles Lebocqz, a pale yellow self; and old Gluck could scarcely be seen in better condition. Altogether the Finsbury collection may be said to be dwarf in habit, sturdy in growth, well flowered, very clean and bright in colour, and most of the blooms of good size and substance, and reflect great credit on Mr. Merville, the superintendent, under whose charge they are.

Victoria Park.

Here, too, under the superintendence of Mr. J. W. Moorman (an old Chrysanthemum enthusiast), is a fine collection arranged in a span-roof house, but of rather higher pitch than the one at Finsbury Park. Mr. Moorman breaks up his somewhat extensive collection (comprising between 300 and 400 varieties) into two large banks with a central path, and the 2000 plants forming his collection, although open to the public since early in October, is still at the time of writing these notes not past its best. Chrysanthemums have been grown for many years at Victoria Park, but the present annual display under glass is only the eighth of its kind. The plants slope down from the sides of the greenhouse in an undulating sweep until each group almost reaches the ground, with a very pretty edging of pompon varieties to bring it to an end. These are bush-grown and very freely flowered, and in point of colour are perhaps even more striking than those seen elsewhere—a remark that is equally applicable to the entire collection, for deep rich crimson varieties, purples, chestnut-bronzes, dark and rosy amaranth shades of colour have been very freely mingled with the pale tones of white and yellow which are usually so striking in most large groups of the autumn queen wherever met with. These pompons are mostly the Cedo Nullis (lilac, white and golden), Bob, Mme. Montels, Sœur Mélanie, Florence, Gen. Canrobert, Mr. Astie, Mlle. Marthe, Dick Turpin, Aigle d'Or and Brilliant. Another little gem employed to lighten the somewhat massive appearance of the large Japanese is Mlle. Elise Dordans, a pretty perfect little bloom of a pale pink shade, and when slightly disbudded is always neat and attractive. This Mr. Moorman has employed very wisely in the manner indicated, and the general effect is much improved. The collection is strong in Japanese, but as an old cultivator, Mr. Moorman does not confine his energies to that group, and we were not surprised to find a somewhat select collection of incurved, many of which we have not noticed at any of the other public displays. John Salter, Gloria Mundi, Prince of Wales and Miss Violet Tomlin are conspicuous varieties of the old show type, while Plenipo (an old rosy purple variety) and Sir Stafford Carey (chestnut-purple) were at one time much more widely known and grown than now. Newer and richer additions have been made to the incurved section like Baron Hirsch, C. B. Whitnall, &c., and these are also well done. Besides the Queens and the Rundles, Mr. Moorman's collection comprises Jeanne d'Arc, Hero of Stoke Newington, the Beverleys, old Cherub, the rich and always perfect Barbara, Lady Slade, Director Kowallek, large in size and of a pale pink, passing to white; Mme. Darrier, Rd. Parker, and many more which will be recognised by admirers of that somewhat stiff and formal group. Gluck, the yellow Anemone, is grown in quantity and is uniformly good. George Sands is another of the same type, and the reflexed section finds representatives in the old purple-amaranth sweet-scented variety Progne, the rich crimson King of Crimsons and Cullingfordi. Japanese of all types from medium-sized reflexed flowers, like Margot and Roseum superbum, to huge mop-like varieties, such as International, are grown in abundance. The new Philadelphia, pale sulphur, and disappointing as elsewhere, is on view. Well-known crimsons like Wm. Seward, J. Shrimpton, G. W. Childs, Mr. J. Laing, Cesare Costa, combined with very rich shades of purple and purple amaranth to be found in old-established varieties like Edouard Audiguier, Alberic Lunden, R. C. Kingston, Mme. de Sevin, Mrs. E. W. Clark, and the newer, but velvety rich purple Deuil de Jules Ferry help very materially to enrich the appearance of the Victoria Park Chrysanthemums as a whole. There is in this section a greater variety than at Finsbury. Criterion, golden buff or cinnamon, is large and fine; Lord Brooke, finely incurved, is also in excellent form, and in similar shades of bronze and yellow Charles Davis, Sunflower, Col. W. B. Smith, W. H. Lincoln, Val d'Andorre, Charles Blick, Mrs. Dr. Ward, Golden Gate, M. Ch. Molin, and Grandiflorum are examples of the diversity of form and colour that those two shades can combine. Avalanche, the white Japanese, well known to frequenters of exhibitions; Fair Maid of Guernsey, same colour; Louise, Florence Davis, with its peculiar greenish centre; J. W. Moorman, creamy white; Mlle. Lacroix, La Meije, a fine novelty of the same colour, introduced last season, all assert their claim to be considered noteworthy varieties in whites. W. Tricker, bright rosy pink, and Mrs. C. Harman-Payne, large rosy mauve, belong to an equally valuable group. Hamlet, salmon-cerise, should always find a place in a decorative group, and Mlle. Mélanie Fabre, dwarf, and of a deep rosy pink, comes in handy for one of the front rows. There is such a wealth of floral material at Victoria Park, that this article might be usefully extended to greater length as having a special interest for those who grow for purposes of decoration, but we have, perhaps, said enough to indicate in a measure a number of varieties with their approximate colours which may be brought together for effective and tasteful arrangement.

CHRYSANTHEMUMS AT WATERLOW PARK.

The disused vineries in which the Chrysanthemums are here housed are daily thronged with visitors, and by this means a grand object-lesson in the grouping together of colours is given. All sections of the Chrysanthemum are grown here. Japanese, incurved, Anemone, reflexed, and pompons are represented each in many colours and in a variety of forms. That a stimulus is given to horticulture by such exhibitions there is no doubt. The County Council are therefore to be congratulated in having achieved a successful issue. What is wanted at Waterlow Park is a better place in which to house the plants during their blossoming period, and also a greater number of the newer varieties. Novelty in the form and colour of the Japanese kinds in particular is what maintains the keen interest of the Chrysanthemum enthusiast, and if this is to be experienced in a greater degree by the general public, it should be considered the duty of those responsible to provide places of public resort, such as the one under notice, with an extra number of new sorts each season. In this way the interest is encouraged. This thought occurred to me when noting the sorts grown at Waterlow Park, so few of the new varieties being represented. Some of the best Japanese flowers seen here were J. Shrimpton, in better form than seen since its introduction, its bright crimson blossoms on very dwarf plants standing out prominently. Gloire du Rocher, crimson and shaded yellow, had large flowers. W. Seward, deep crimson, was very effective. Mme. Isaac, with large, creamy white flower and broad petals, was pretty, and good specimen blossoms of Commandant Blusset, carmine; W. H. Lincoln, yellow; Comte F. Lurani, rose, shaded white, very dwarf; Miss Dorothea Shea, bright red, flushed yellow, on a late bud; and some extra good blossoms of Puritan, with its broad incurving white petals, tipped rosy mauve, were amongst those specially admired. Two good decorative sorts were noticeable, the blossoms being freely produced, viz., Alex. Dufour, rosy purple, dwarf, and October Yellow. The Anemone section was represented best by even and clean blooms of M. Charles Lebocqz, colour citron-yellow, tinted carmine. Of the incurved varieties, Jeanne d'Arc, Mr. Bunn, Beverley, and Mme. Darrier were worthy of extra notice, the last-named, one of the finest acquisitions of recent years, colour nankeen-yellow, being specially good. The charming medium-sized incurved blossoms, represented by Mrs. Geo. Rundle, white; Mr. Geo. Glenny, very pale yellow; and Mrs. Dixon, golden yellow, illustrated the pleasing form and colour of these easily grown sorts, and, taken together with their free-flowering qualities, proved at once their value as the best of the decorative kinds. Anemone pompons were seen in freely flowered plants of Marie Stuart, pale lilac outer florets, light yellow disc, and its pretty and chaste white sport Emily Rowbottom. The general pompon section was best represented by Elise Dordan, with pretty light

rose-coloured globular flowers; Howard H. Crane, brightest crimson; William Westlake, bright yellow; and Golden Mme. Marthe. Each of these sorts was allowed to produce its blossoms quite freely; consequently when placed here and there amongst the larger flowering kinds, they formed a nice break in the somewhat formal arrangement of grouping practised here. Masses of Aster Amellus bessarabicus with its pretty blue flowers were placed to advantage throughout the houses, and formed a pleasing contrast to the surroundings. A large number of early-flowering Chrysanthemums are planted in beds and borders in different parts of the park, and these have kept the place quite bright during the autumn. One of the very best varieties is Piercy's Seedling, a dwarf, free-flowering pompon of a bronzy yellow colour. C.

Open spaces.—The monthly meeting of the Metropolitan Public Gardens Association was held at 83, Lancaster Gate, W., the Earl of Meath, chairman, presiding. It was announced that Mr. H. C. Richards, M.P., had agreed to provide funds for placing some gymnastic apparatus in the recently-opened ground, Bartholomew Square, E.C., that the London County Council had declined to sanction plans for the erection of houses on the vacant site in Compton Place, W.C., and that the association had taken part at the recent inquiry held by the Charity Commissioners in opposing the proposed demolition of the Trinity Hospital and Almshouses, Mile End Road. Plans for the laying out of St. James's Churchyard, Piccadilly, a burial-ground in York Street, Walworth, and the ground by St. Matthew's Church, Fulham, were considered, and a letter was read from the vestry of St. James's, Westminster, with regard to the first-named ground. It was announced that the garden laid out by the association in Quadrant Street, Canning Town, E., had been opened to the public, and that the churchyard of St. Leonard's, Shoreditch, had been taken over by the vestry as a public garden. It was agreed to offer £500 towards the acquisition, and £500 towards the laying out of the Guy's Hospital disused burial-ground in Bermondsey. A large number of other matters engaged the attention of the meeting, including the preservation of an open space at Ham in connection with the Bill deposited by the Dysart Trustees, the acquisition of the Copperas, Bromley, and of the Millbank Prison graveyard and other sites, the opening of Charterhouse Square and the planting of trees in the boxes by the Royal Exchange and in a site in Mayfair.

The Vine weevil.—Will someone tell me how to get rid of, or keep down, the maggots, a few of which I send? I should also like to know the name. There are two or three in the box that are passing into another stage; are they beetles when developed? They seem to get at the roots of Polyanthuses and Primroses, and make their way to the heart of the crown, totally destroying the plants. This year they appear to be more numerous than ever. I have also found them attacking Saxifrages and similar plants.—ZEMO.

*** In reply to the above, the maggots you send are the grubs of the black Vine weevil (Otiorrhynchus sulcatus), a common and most destructive pest. When a plant is attacked by these grubs there is nothing to be done but to shake it out and pick out the grubs. Any insecticide is so weakened by passing through the soil, and it is so uncertain if it will soak in any quantity to where the grubs are, that it is of very little use trying to use one. The most effectual way of "stamping out" this insect is to kill the weevils, which are nearly as destructive as their grubs. They feed on the foliage of various plants—Vines, Peaches, Strawberries, and many plants which are grown for the sake of their foliage. Unfortunately, they only feed at night time, and during the day hide themselves so cleverly that it is almost impossible to find them. Any plants which it is supposed have been injured by this weevil should be placed on a white sheet during the day. If they can be laid on their sides so much the better, as when the weevils drop they will not fall on to the dark earth, and after dark as bright a light as possible should be introduced suddenly; this will probably cause the beetles to fall on to the sheet. If the weevils do not fall, the plant should be smartly shaken and well searched. Small bundles of dry Moss or straw should be tied to the stems of the plants and laid on the mouths of pots, into which they might creep and hide. The beetles are each about three-eighths of an inch long, somewhat pear-shaped, and almost black. Another kind, whose grubs are very similar to those of the black Vine weevil, is clay-coloured, and known as the clay-coloured weevil (O. picipes). It is just as destructive as its relative.—G. S. S.

Removing greenhouses erected by tenants.—I am going to put up a small greenhouse about 20 feet long as a tenant's fixture, and should be very much obliged if you could inform me which is the best and cheapest method of doing so. I must be able to remove it when I leave, and to be quite sure it is not a fixture to the land.—E. H. M.

*** The general rule of law is that whatever is affixed to the demised premises by the tenant can never again be severed without the consent of the landlord. This rule has become largely modified, but the exceptions may be ranged in three classes: (1) Fixtures erected for ornamentation and convenience—usually removable when removal can be effected without damage to the freehold; (2) fixtures and buildings erected for trade purposes—for the carrying on of trade—which may be removed by the tenant; (3) fixtures and buildings declared by statute removable upon certain conditions, as under the Agricultural Holdings Act, 1883, and the Market Gardeners' Compensation Act, 1895. Applying these rules and enactments to the case of a greenhouse, it may be said that such an erection upon a market garden or upon an agricultural holding may be removed during the tenancy upon the expiration of a month's notice given in writing by the tenant to the landlord, provided certain minor conditions are observed. But the case of a greenhouse erected by a private occupier for his private use is a very difficult one. Such an erection is not for ornamentation, nor for convenience, even though removable without injury to the freehold. There is no case in which the plain issue has been decided in a court of law, but the best writers on the law of landlord and tenant consider the point very doubtful, and some incline against the tenant's right of removal. The safest plan for a tenant who wishes to erect a greenhouse for his private use is to obtain the written consent of his landlord before erecting it, such consent to include the right of removal. Failing this, he should take care to make the foundation separate from the building itself, and then allow the greenhouse to rest upon the foundation by its own weight. The use of brick or cement for a foundation is not safe if the erection is secured thereto, but if such materials as old railway sleepers or other timbers were laid upon the ground and the greenhouse was bolted to them, it would be clearly removable, not merely as a fixture, but as a chattel. Such a method would be very economical. —K. C. T.

The weather in West Herts.—The 15th was a warm day for the middle of December, otherwise both the days and nights during the past week have been about seasonable in temperature. On the coldest night the exposed thermometer showed only 9° of frost. The ground is now about 5° colder at both 1 foot and 2 feet deep than it was at the beginning of the month, and at the latter depth is slightly warmer than the December average. Shortly before half-past five on the evening of the 12th inst. there occurred a very sharp fall of hail. The wind, which had previously been only of moderate strength, all at once increased to a strong gale, and veered from south to west. During this sudden blast, which lasted only a few minutes, the temperature of the air fell as much as 8°, rising again 2° directly the hail ceased. Lightning was also seen and thunder heard. The 13th was a very rough day, the mean velocity of the wind for the seven hours ending 5 p.m. being 29 miles an hour. Between 1 and 2 p.m. a velocity of 31 miles was recorded, direction west, making this the fourth day during the month when the wind has risen to the force of a gale. On seven of the last ten days no sunshine at all has been recorded.—E. M., *Berkhamsted.*

NOTES OF THE WEEK.

Winter-blooming Crocuses.—The vivid orange-coloured C. vitellinus and the pale C. hyemalis have been in flower for several weeks, and are even yet bright on sunny days, notwithstanding heavy rains and rude winds. C. Imperati has also just opened its fawn-coloured buds to the wintry sunshine. Narcissus Tazetta var. remopoliensis and one or two others have also been in bloom for some weeks under a warm wall. —F. W. B.

Thunbergia grandiflora.—Mr. Lakes sends us from his garden at Trevarrick, St. Austell, a handsome spray of bloom of this Thunbergia. He says he finds it a free bloomer, and at this time of the year very useful. At Kew this plant also does well in the Palm house, and is also at home trained along the roof of the Victoria Regia house. The flowers are of a pale blue, lined with a deeper tint, the interior of the throat almost white. There is also a white form of it. A coloured plate of the two forms was given in THE GARDEN of March 2 of this year.

Skimmia japonica.—This exceedingly pretty berried shrub makes a very useful subject for pleasure ground borders, but should not be planted in poor soil, as it is rather a slow grower. Associated with such things as Kalmias and Andromeda floribunda, it has a cheerful appearance at this season of the year. I have never known blackbirds and thrushes take the berries, this fact indicating that there is some property in them injurious even to the feathered tribe. The berries of this shrub and those of the Deadly Nightshade are the only ones, so far as my knowledge goes, that birds refuse to eat. The Skimmia grows all the better if a fourth part peat is mixed with the compost.—J. C.

Calycanthus floridus (Allspice Tree).—Mr. Burrell complains of having been supplied with a scentless form of this plant. As long ago as 1836 Loddiges' catalogue contains a list of six varieties, amongst which is one named inodorus, from the fact of its flowers having no scent. Loudon in 1842 quotes these, and also gives two other varieties of C. floridus. He further mentions that C. glaucus, C. g. oblongifolius, and C. lævigatus have all much less scent than C. floridus. I have an impression that the large-flowered C. macrophyllus, which was introduced in 1848, is not so highly perfumed as the original species, which has been known in our shrubberies since 1726, and which from the number of its named forms is evidently a very variable species if raised from seed.—W. T., *Bishopsteignton.*

Aristolochia tricaudata.—This quaint and somewhat rare species from Mexico is now flowering with me. It is curious to notice how this plant develops flowers near the soil on its old hardened wood stem, as well as on the last and yet green growth. This peculiarity it has in common with some few other species. The flowers remind one of those of Masdevallia Chimæra being split into three tails each 4 inches long and somewhat twisted. The colour is a brown-chestnut. The light green leaves are each about 7 inches long by 3½ inches wide. It can be propagated by cuttings inserted in sandy peat, with a good bottom-heat under a bell-glass. Good cuttings are scarce, as the plant is rather a shy-branching one. For the stove at this dull season of the year it is a curiosity not out of place amongst Orchids, as Calanthe Veitchi,

Cattleya Trianæ, and Trichopilia tortilis, which are now coming into bloom.—J. Sallier, *Paris.*

Randia macrantha.—In the Palm house at Kew there is now a large specimen of this rare stove plant in flower. It is nearly related to the Gardenias, and especially to G. Stanleyana, which is, indeed, now looked upon as a Randia too. It is a bush 5 feet to 6 feet high, with leaves 4 inches to 6 inches long by about one-third as much in width, and of the dark glossy green familiar to us in the foliage of the common Gardenia. The flowers are peculiar in shape, resembling a long and slender trumpet. Each one has a corolla about 10 inches in length, the tube of which for the lower two-thirds of its length is no thicker than an ordinary penholder. The spreading and slightly recurved lobes are ovate, and the colour is a pure creamy white. The flowers are borne singly on very short stalks terminating the branches. Randia is an extensive genus, containing upwards of 100 species, many of which are natives of Africa; others, however, are found in Asia and tropical America. R. macrantha is a native of Sierra Leone.

Pears President Barabe and Beurre Rance.—The editorial note on President Barabe Pear as sent by Mr. Allan, of Gunton, is interesting, as it proves that the limited list of later varieties is gradually increasing. I cannot, however, agree with the assertion that to grow Beurré Rance is to waste precious space in our gardens. Here in South Notts this old Pear ripens satisfactorily in five seasons out of six, and is on our soil better flavoured than Josephine de Malines. Probably it will be found that the flavour of President Barabe, like that of other late Pears, is much affected by indifferent seasons. I have sent several fruits of Beurré Rance for you to taste. —J. Crawford, *Coddington Hall, Newark.*

*** We thank you very much for sending us the finest B. Rance we have seen in England. The flavour of the Pear, as tested by the fruit sent, does not equal that of President Barabe, Winter Nelis, Easter Beurré, or Doyenné du Comice. The flavour is somewhat watery and the flesh gritty as compared with that of the best Pears.—Ed.

Nepenthes Rajah.—A robust and healthy specimen of this now rare Bornean Pitcher Plant is at present to be seen in the private house devoted to cool Orchids, &c., at Glasnevin Botanic Gardens, Dublin. The plant has two fine new pitchers and several old ones, while there are very healthy points to some of the younger leaves, betokening their future development into gigantic urns. The pitchers of this noble species when fully grown each hold three to five pints of water. They are of a stout leather-like substance and texture, and of a brownish purple colour below, the glossy rim or mouth of the pitchers being of a rich red-brown hue. The midrib emerges from the thick leaf apices in a peltate manner, thus differing from all other species in which the midrib is prolonged from the points of the leaves. In the same house are healthy plants of the Cephalotus follicularis, a very large pitchered and highly coloured form, and also specimens of the Sun-cup, or Heliamphora of Guiana, one example of which bloomed here some time ago. Mr. Moore is an adept at rearing rarities, and has a healthy little colony of seedlings of the rare Rovidula gargonis, a plant resembling Drosophyllum lusitanicum.—F. W. Burbidge.

Erigeron mucronatus is a hardy, graceful, ever-blooming plant that might often be used with good effect as an edging, either to permanent groups or to arrangements made for the summer only. Its flowers are no larger than those of the common Daisy, but they have a beauty all the same, and throughout the year come with a persistency that is only checked by the approach of winter, and even now, in the last month of the year, there are still many flowers open upon an edging of several years' standing that margins a bed of standard Roses and Carnations in the flower garden at Betteshanger Rectory. Those who are seeking for something that will give an agreeable and pretty change from the conventional edging plants may well be advised to give this a trial. Not only is it hardy and ever-blooming, but it sows itself from seed freely, so that an unlimited stock can be quickly obtained. The surface of the bed above mentioned was green with a crop of young plants that have sprung up this autumn, the seed from the earlier flowers having been wafted all over the bed by wind. This plant has all the essential qualities of an edging plant, as it makes a perfect unbroken line, whilst its habit is slender, graceful, and informal when untrimmed. It is seen to the best advantage as an intervening line between grass and flowers of bright colour.

Leycesteria formosa.—It is astonishing that a distinct shrub of so free growth and easy propagation as the above should not be more generally planted throughout the country, for distinct from the ordinary run of flowering shrubs it certainly is, and blooming late, even through a great part of the winter, its reddish purple, pendulous bracts, contrasting with the polished green shoots, are attractive, especially so on bushes that have attained a goodly size. In parts of the country where the severity of some winters might kill it to the ground line, it should not be excluded from the collection, for undoubtedly the hard-pruned bushes—either by knife or frost—produce larger bracts on shoots emanating from the base of the plant than on those from older wood. Neither is it a plant particular as to soil, though I believe it thrives best in light, open soil, fairly enriched. Its propagation is of the simplest. Tolerably long-ripened shoots of the current year, inserted deeply in sandy soil in the open in November—the same as Gooseberries and Currants are propagated—will strike and form good roots within the twelvemonth. As soon as put in, the cuttings will be all the safer of a mulching of spent Mushroom manure or any light frost-resisting material. —J. R.

Helleborus niger var. altifolius. — The Chrysanthemum monopolises so much attention now that little thought is given to any other flowers. A plant that will enliven the dullness of December days out of doors and make a picture, with little care or attention, surely deserves to be brought out from the comparative obscurity in which it lives, have its merits proclaimed and its numbers increased, so that all who desire it can have it in quantity. All who know the fine Christmas Rose that goes under the above name are agreed that it, before all other forms, deserves good treatment at our hands, yet how rarely do we see it good, and still more rarely in quantity in either gardens or nurseries. It gives us several weeks of beauty before the colder days of winter set in. At Betteshanger Park, near Dover, we recently saw a fine lot of this Christmas Rose, strong in growth and abundant in blossom, many of the finest flowers borne on stems nearly a foot above the ground. The chalky loam of the district is no doubt congenial to it, but there are hundreds of gardens where it would grow as well, and whether seen in the garden or cut and carried into the house it is as choice and lovely as the Bermuda Lily or the Eucharis, and altogether more lasting. A coloured plate of it was given in The Garden for July 6 of this year.

Cattleya luteola.—This is a small, but pretty species, which in these days when so many fine Cattleyas and Lælias have been added to the list of cultivated Orchids is not unlikely to be passed over. It would be a pity were it to disappear entirely from our collections, for although small —perhaps the smallest of all Cattleyas—it has a modest beauty of its own, and besides this it flowers at a season when it is most welcome, viz., December. It has one-leaved pseudo-bulbs, which are about 2 inches high, the leaf being about twice as long. The flowers, of which three or four appear on each spike, are of a pale yellow, and measure 2 inches across. The middle lobe of the lip has a white margin, and the side lobes are striped with dull reddish purple. The species has been in cultivation for upwards of fifty years, having first appeared with Messrs. Backhouse, of York. It is a native of Brazil, and is sometimes grown as C. Holfordi. It requires the usual Cattleya treatment as regards compost and temperature, but on account of its size is better grown in a basket and suspended near the roof glass than in a pot. The variety Roezli, which was discovered by the collector whose name its bears in Peru about 1874, has more brightly coloured flowers than the type, and there are two large purple spots on the lip.

Dendrobium bigibbum.—Of all the Australian Dendrobes, which are more numerous than their rarity in gardens would lead one to imagine, this species is, I think, the most beautiful. Unfortunately, it is not one of the easiest to grow, and usually deteriorates in vigour a few years after importation. Although the height of its flowering season is now past, it may still be seen in bloom; indeed, where a few plants are grown its flowers can always be had throughout the last three months of the year. The flowers are produced on a long raceme, and have much the same pose as those of D. Phalænopsis, now so much grown. They are smaller than those of that species, being about 2 inches in diameter. The sepals and petals are of a rich warm purple, with a thin thread-like line of white running round the margins. The lip is of an even richer purple, the side lobes turning up over the white column. The flowers have a compact, full appearance, owing to the overlapping of the segments. It was originally introduced from Australia in 1824, and a drawing of one of the original plants made by the famous botanical artist, Francis Bauer, is preserved in the British Museum. Coming from one of the sunniest regions of the globe, it should be given all the light possible, and during growth it requires the warmest and moistest conditions available.—B.

Moss on lawn (*Anxious*).—Use sulphate of iron in the proportion of 1 lb. to two gallons of water. The solution should be made in a wooden tub or barrel. It should be made with soft water, and also just before using it, as it loses strength if kept. It can be applied at any season. When the Moss begins to turn black, this shows that the sulphate is taking effect. If the Moss only turns red, a second application will be necessary. Seeing that Moss indicates poorness of soil, it will be advisable to give the lawn a good top-dressing after the Moss has been destroyed.

The national testimonial to Mr. A. F Barron.—I should like to suggest, quite unofficially, of course, that the secretaries or treasurers of the numerous horticultural societies should be courteously requested to obtain permission to make some contribution to this fund. It is not so much the amount of the subscriptions as their wide and representative character in a case of this kind. Some of us are of the opinion that this testimonial should be really a national one, as a genial expression of fellow-feeling for one of the most generally respected members of our profession. It would be a further act of graceful kindness if the council of the R.H.S. would make some special grant as a beginning to this fund, and it would no doubt be taken as a fitting emphasis of their courtesy in recently having offered a life fellowship to Mr. Barron. The hon. treasurer of the fund is Mr. H. J. Veitch, F.L.S., and all subscriptions, &c., should be sent to the hon. secretary, Mr. B. Wynne, 1, Danes Inn, Strand, London, W.C.—F. W. Burbidge.

Inquirer.—"Oliver's Elementary Botany" will answer your purpose.

Names of plants.—*W. W. H.*—1, too poor to identify; 2, Origanum Tournefortii; 3, Artemisia tanacetifolia; 4, Salvia splendens.——*W. A. G.*—1, Oncidium divaricatum; 2, Oncidium tigrinum.——*C. Mounsdon.*—A very good lot of flowers.——*F. Williams.*—1, Adiantum cuneatum; 2, A. pedatum; 3, Pteris cretica albo-lineata; 4, Asplenium viviparum; 5, Nephrolepis exaltata.

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"This is an Art
Which does mend Nature: change it rather; but
THE ART ITSELF IS NATURE."—*Shakespeare.*

STOVE AND GREENHOUSE.

EUCHARIS FOR MARKET.

IN all the great centres of the cut-flower trade the Eucharis is ever in the front rank. It is, in fact, indispensable in almost any and every floral arrangement where choice flowers may be used. Perhaps one of the grandest pictures among stove-flowering bulbs is a houseful of Eucharis in bloom. Even in a market nursery the flowering continues for some time, generally from a fortnight to a month from the first gathering, where the blooms are taken singly as they expand. Much of this, however, depends on the wants of the market at the moment, and also the time of year at which the flowers are ready. It is only natural with any flower so constantly in demand and so popular in all our large markets that there are men to be found who not only make these flowers a sort of specialty, but who also endeavour to maintain a supply throughout the greater part of the year. The grower who is capable of so much quickly creates for himself a name. Unless a man is possessed of capital for the purpose, it is a question of time to work up a stock of Eucharis, that is, a stock sufficient for the purpose indicated. To devote a series of houses to Eucharis alone and at the commencement of a business, requires not only great faith in the result, but capital to work upon till the bulbs attain flowering size. Once this is secured, the flowering of the bulbs is a comparatively easy matter in the hands of a careful cultivator; indeed, from the first their

CULTURE

is an easy matter if attention be paid to a few essential points. These are heat, soil, watering, and resting. The first, of course, is the greatest of all in their successful cultivation, and may range between 65° and 80°, with an increase on the latter by sun-heat. High temperatures are always more conducive to health in these plants than are low ones, especially if in the latter extreme care has not been taken in the watering. Sickly bulbs quickly follow on continually low temperatures and much water at the root. As a rule, in market nurseries where these plants are grown to any extent very large pots are avoided and bottom-heat, as usually understood, dispensed with. Pots of about 9 inches to 11 inches across are found quite large enough not only for handling, but are considered as conducing to continued health, by accommodating only a minimum quantity of soil. Large pots, on the other hand, are ungainly and contain a larger amount of soil than is really needful for the plant. Should this by any means become over-watered and the whole soured, the failure of the plant is all but sealed. Small pots, it is true, are very quickly filled with roots that threaten to lift the ball bodily from its place, but the plants remain perfectly healthy notwithstanding, and in this state can bear a greater share of moisture. In fact, I believe the failures would be fewer if smaller pots generally were employed, and I know from experience that good flowering bulbs may be well grown in 8-inch pots. Soil is also important, and the most suitable mixture is one mainly of good yellow loam of a rough fibrous character, a sixth part good fibrous peat in small nuggets, Oak or Beech leaves, half decayed, at the same rate, and old mortar rubbish and charcoal nuts, at the rate of a barrowful each to every load of soil. A free addition of sharp sand and a sprinkling of soot will also be helpful. What the roots prefer is a free, open mixture of soil, and if all the fine is screened away, so much the better. Indeed, this is much the surest way of keeping the soil open for any lengthened period. Soils vary so very considerably, that the more minute details must be dealt with according to individual circumstances. Some soils always remain hard, nutty particles, that contain very little dust; others, again, while on first view appearing fibrous, rapidly break down into fine powder. Of this latter kind is much of the soil of this part of Middlesex, and this very quickly runs together and becomes sodden. Those who have the choice of soils should always try for the former kind for many things, and Eucharis in particular.

Perfect drainage is also most important, and should consist of a large-sized crock or oyster shell placed hollow side downwards; above this a layer of medium-sized pieces, and finally thin slices of freshly-cut turf, grass side down to cover the drainage completely. So far, then, I am strongly in favour of medium-sized pots, a limited amount of comparatively rough soil, which always remains in a sweet condition much longer than the fine soil, and, third, perfect drainage. But now a word about

BOTTOM-HEAT,

or rather why it should be dispensed with, as is done in most market nurseries. As a matter of fact no one really finds fault with the bottom-heat alone; it is the materials usually employed in the bottom-heat that are really injurious. Plunging in bottom-heat is indeed part and parcel of a bygone time for these stove plants, and however helpful or necessary it may be in the forcing or propagating department, which is only temporary, is neither necessary nor helpful to healthy growing plants, and, more than this, it is not conducive to a healthy root action. To keep the roots of any plant, stove or what not, permanently in a higher temperature than the foliage is in distinct opposition to Nature, and must sooner or later fail; and use what we may, fibre or tan, there is always a decay going on around what should really be the healthiest part of the plant. Moreover, any plunging material must quickly sour unless frequently renewed, while its very presence stifles, so to speak, the healthy functions of the roots. Plunging in bottom-heat I only countenance for bulbs that have been a long time dry or to resuscitate sickly stock. Much the simplest way of growing these plants, and one that finds favour among the market growers, is on simple wooden stages. The least expensive kind is made of wooden uprights and cross bearers, with narrow strips of wood 3 inches or 4 inches wide nailed upon them. Upon these open stages the plants are grown, the pipes being distributed beneath. In this way the houses are heated uniformly and in such a manner that no plant receives any excess. Upon these open stages souring and its attendant evils are very rare. By a rap at watering time the condition of any plant may easily be determined, a thing by no means easily accomplished when the plants are plunged. During the growing season floors and stages are kept in a state of semi-saturation and overhead in proportion. Where much syringing is done overhead very little root watering is needed, owing to the leaves and leaf-stalks, which constitute a ready conduit to the roots of the plant. Indeed, some years ago I resuscitated a large batch of these on a bottom-heat of 95° by the use of the syringe alone, and for upwards of eight weeks the plants were never watered otherwise. In some of the larger market nurseries fully a dozen or more long, spacious span-roofed houses are devoted to the Eucharis. Many thousands of plants are grown in the endeavour to maintain a never-failing supply. The least demand for such flowers is during July, August and September. Yet it frequently happens that a big "throw" will come in in one of the former two months when there is practically no demand. This has to be endured, however, simply on account of the next flowering of the same batch, which generally makes amends for the summer loss. During summer the plants are rested materially from fire-heat and heavily shaded from the sun with permanent shading or roller blinds. Another large item where the Eucharis is extensively grown for market is found in picking, sorting and packing the blooms. When the Eucharis is in full swing it is quite an every-day occurrence for one large grower alone to market 200 or 300 dozen blooms, a considerable item to dispose of in one morning before breakfast, as it were. Eucharis blooms are not usually sold in bulk, but in small quantities, and are packed a dozen and a half best, or two dozen seconds into shallow boxes about 7 inches wide, 3 inches deep and 1½ feet long, a layer of green Moss in the bottom, and afterwards neatly lined with white tissue paper. An incision is then made with a small penknife in the bottom piece, and the tube passes through into the damp Moss, keeping the flowers fresh and in position at the same time. According to the season, the blooms are damped or the reverse. Some growers simply cover with white tissue paper, others with strips of cotton wool, skin side downwards. The latter is by no means necessary unless for a long journey by rail. Even then it is calculated to do more harm than good to the blooms, as the latter can rarely ever be freed from it when once it has come into contact with them. E. J.

Camellia Sasanqua.—Two years ago a first-class certificate was awarded to this Camellia from specimens sent by Messrs. Veitch, of Chelsea, who at that time stated that at Coombe Wood it had proved to be hardier than the ordinary Camellias, and also set its buds more freely. As the specimens were shown on December 13, at which time the plant was flowering profusely in a cool house, it must certainly be regarded as a valuable subject for the embellishment of the greenhouse or conservatory at this season, for, even where other Camellias are grown, this is so dissimilar from the ordinary garden varieties, that it is sure to be particularly noticed. It is an old garden plant, but would appear to have almost dropped out of cultivation till Messrs. Veitch took it in hand, and in all probability it will now become far more popular. Concerning this particular species, Professor Sargent, in his "Forest Flora of Japan," says: "Sasan-kuwa (Camellia Sasanqua), a small, bushy tree of Southern Japan and China, is perhaps more commonly encountered in Japanese gardens than the Tsubaki (C. japonica), and in the first week of November it was just beginning to open its delicate pink flowers in the gardens of Nikko, although the night temperature was almost down to the freezing point." There are several forms of C. Sasanqua, but the particular kind upon which the certificate was bestowed was that which produces single pink blossoms. A semi-double form with white flowers was shown at the same time. There is also a variety which is occasionally met with whose leaves are prettily variegated with white, but it is at times very liable to revert to the normal green-leaved type. The flowers that I have seen of this variegated kind are single pink. The foliage of C. Sasanqua is very much

smaller and the branches more slender than those of C. japonica. Another point of difference is that C. Sasanqua can be struck from cuttings much more readily than the other. It may be employed for the same purposes as C. japonica, that is to say, as a bush or for clothing a wall, in which latter position, if out of doors, its extra hardiness will stand it in good stead.—T.

Celosia pyramidalis.—This may be had in bloom at various times of the year, but in many places at least it is far more valuable during the autumn and early winter months than at any other time. The feathery plumes of brilliantly tinted blossoms are extremely useful in a cut state, and as flowering plants they will, in a greenhouse temperature, if the atmosphere is not too much surcharged with moisture, remain bright and fresh in many cases for a couple of months. For autumn flowering the seed may be sown about midsummer or a little later on, and grown on freely they will form neat flowering specimens in pots 4½ inches in diameter. As the bulk of flowering plants during the autumn consists of Chrysanthemums, these Celosias are extremely useful. Though liberal feeders during the growing season, these Celosias are very impatient of an excess of moisture as autumn advances, while the fogs often experienced in the neighbourhood of London play sad havoc with the foliage. C. pyramidalis is said to have been introduced from India in 1820, and now seed of its numerous forms can be obtained at a cheap rate from any seedsman. The specific name of pyramidalis is certainly a very appropriate one, as a well-grown specimen will often form an almost perfect pyramid.—H. P.

POINSETTIA PULCHERRIMA.

THERE are now several distinct varieties of this useful plant. The earliest variety has been in fine condition with me (December 7) for the past fortnight. This early variety is known as carminata. It is not quite so deep in colour as the later variety, and a curious fact is that, though the leaves are more lobed than are those of the late variety, the bracts are nearly always ovate, very few having any lobes, while in the other variety the reverse is the case, the leaves being ovate and the bracts lobed. The double variety plenissima is the latest. This will hold out until February, but it requires a good deal of care to do this well; it is of weakly growth compared with the others, and the bracts are apt to drop off before they are fully matured. It is, however, worth a little extra care, for when well done the additional bracts which come from each individual flower fill up the centre and add much to its beauty.

In growing Poinsettias, many people start the plants too early in the season. It does not matter so much where they are only required for cutting, but it is impossible to make dwarf plants with foliage down to the pots. June, or even July, is early enough to propagate, but the old plants must be looked after, so as to ensure getting good strong cuttings, or if the stock is short, some cuttings may be put in earlier and the tops of these taken later on. Short cuttings are best. They must be cut off quite close below a leaf. This is not so important when the cuttings are taken from old plants close to the old wood, but in taking tops, the stem between the leaves will be found to be hollow, and must be cut quite close to the joint where it is solid. If taken off and put in singly into small pots, using light sandy compost and a little quite dry sand at the base of the cuttings, they will soon take root and should start away without losing a leaf. Poinsettias like a good rich loamy compost. They do not require any artificial heat during the summer, but should be grown as close to the glass as possible, and if careful attention is paid to the watering they do not require any shading—in fact, the more fully they are exposed to the sun the better. Warmth must be given as soon as the nights begin to get chilly in the autumn. They will not appear to suffer from cold for some time, but as soon as they are placed in warmth the leaves will turn yellow and drop off. I have seen plants which had been left in a cold house late in the autumn which had no appearance of having suffered, but when taken into the stove the whole of the leaves have dropped off. When the plants are developing their bracts they may be liberally fed with liquid or artificial manure, but the latter should be applied in small quantities and repeated about every five or six days. H.

PRUNING STEPHANOTISES.

SHOULD Stephanotises be pruned, and to what extent, is a question well worthy of discussion. Some growers of my acquaintance use the knife rather freely very early in the winter, and are satisfied with the results. I have tried their methods, and was dissatisfied with what followed. To me it appears to be much the same with Stephanotis floribunda as with fruit trees. If we want plenty of growth, prune hard, but in order to have abundance of bloom with a minimum of growth, then we must prune lightly, the pruning taking the form of thinning out rather than much shortening back. When most of the young growths made during the preceding season are cut back to the second or third joint, the resulting growths are extra strong and usually run to a length of several feet, or even yards, before showing flower; whereas if these same well-matured growths had been merely thinned out and those reserved allowed to break naturally, they would do so at nearly every joint and commence flowering at once. What experienced gardener has not seen hundreds of short growths full of lovely flower-trusses hanging down from plants trained thinly over the roof of a plant stove? Not a few who have seen these wondrous displays of Stephanotis failed to realise that it was owing to the treatment the plants received, and went away with the idea that it was a superior variety. If they had done as I once did, struck cuttings of a presumably free-flowering form only to find, after giving the plants a fair trial, that they were neither better nor worse than those long since established on the place, a lesson would have been learnt.

Many of us err, or have erred, in giving the plants what might be termed unlimited root-run, this leading to the formation of such a number of long and, it may be, flowerless growths, as to almost necessitate a free use of the knife at pruning time. Really grand plants have been flowered in 18-inch or smaller pots, as well as in tubs and small loose brick pits, for many years in succession, the Stephanotis not objecting to having its roots reduced when it is necessary to renew the soil, an operation which should be carried out just when the plants are breaking into growth. There are two methods of training the plants, viz., that of spreading the growths thinly and irregularly all over the roof trellis, and of taking the main growths or stems straight up or down the roofs and training the flowering wood across the roof, two or three going to each wire. The latter plan is far the better in every way, and is, in fact, the only one which admits of systematic training, cleaning, syringing, and such like. Each winter some of the old growths should be cut out and the young ones be laid in, and if the latter are well matured, they will break freely throughout their length, flower-trusses frequently showing at the second or third joint. In some cases embryo flower-trusses will be found in a dormant state at the joints towards the end of the young wood. They were formed too late to develop last season, but if reserved will be the first to expand next spring, proving most valuable accordingly. Cutting out old growths will invariably lead to the formation of as many or more strong young growths, some or all of which may be laid in for the purpose of producing wreaths of flowers in 1897.

Mealy bug is responsible for innumerable failures with Stephanotis. Many days have been spent by most of the present generation of head gardeners cleaning Stephanotises, but surely the experience thus gained when young men has had the effect of inducing some at least of them not to trust the plants to the tender mercies of thoughtless journeymen and boys. Those days on the floors, in tubs of strong insecticides, and under other rough treatment, never yet thoroughly got rid of mealy bug—at least, I never found that it did—but if it failed to destroy all the bug, it never failed to greatly damage the plants. Instead of taking down the plants, unless for the purpose of rearranging, the better plan is to thin out where crowded and then to depend upon hot water, petroleum, soft soap and the syringe for getting rid of the bug. Let the water be heated to a temperature of not less than 112°, and to every 3 gallons of this add a lump of soft soap of the size of a hen's egg and 6 ozs. or 3 wineglassfuls of petroleum. Keep the latter from floating on the top in the usual way—that is to say, by either forcibly returning every second syringeful into the receptacle holding the mixture or else by having two syringes going. When applied thus hot and with a fair amount of force, it will cause the mealy bug to simply melt away and prove far more effective—always provided it is done in no half-hearted manner—than any amount of sponging and brushings with and bathing in tubs of strong insecticide. The petroleum mixture is equally efficacious against brown scale. The syringe during the growing season should do the rest. W. I.

FLOWER GARDEN.

GARDEN LILIES.

TWENTY years ago Lilies as a class were not grown to nearly the same extent as they are at the present day, and the fact that many of them are so well adapted for the embellishment of the open garden was then to a great extent ignored, though it must be confessed that the grand masses of L. candidum and L. chalcedonicum at that time met with in old-fashioned cottage gardens are not surpassed, and, indeed, rarely equalled in more ambitious establishments at the present day. Now, however, many different Lilies are planted in quantity, and, among other places, we have been shown at Kew what grand effects can be produced by bold masses of them in some cases associated with low-growing shrubs. Many of them will succeed in any ordinary good garden soil, while in the case of others an admixture of peat or well-decayed leaf-mould and sand will be of considerable service. Lilies are by the botanist divided into five groups. In the group or subgenus known as Archelirion, though consisting of very few species, are included L. auratum, L. speciosum and L. tigrinum, all of great value from a garden point of view. In dealing with garden Lilies, I will first of all mention

LILIUM AURATUM, the golden-rayed Lily of Japan. This is decidedly erratic in its behaviour, and is in some cases very unsatisfactory where perhaps the season before, and under exactly the same conditions, it was all that could be desired. Various suggestions have at times been made to account for a habit this Lily has of suddenly dying off when apparently in good health. The cause seems difficult to determine, but whatever

it be, I have noticed that where the plants are growing in the open and fully exposed to the sun the greatest amount of mischief is to be noticed when heavy showers alternate with very bright sunshine. One of the most satisfactory modes of treatment is to associate it with Rhododendrons, as the soil and other particulars suitable for the Rhododendrons are favourable to this Lily, and the partial shade helps to ward off these attacks of sunstroke, if sunstroke it really is, that cause the deaths of so many. The huge clusters of massive blossoms as seen at Kew form a grand feature towards the latter part of the summer and early in the autumn, the interest in them being still further heightened by the individual differences to be found both in foliage and in flower. Two very distinct varieties of this Lily—rubro-vittatum or cruentum, and virginale or Wittei—are both very beautiful, but, as a rule, too delicate for the open border. Such, however, cannot be said of the variety platyphyllum, which is far more robust than the typical L. auratum. In the variety platyphyllum the stem is stouter, the leaves very much broader, while the flowers are larger and more saucer-shaped. It is really a grand Lily, and though we have not yet this year had any large importations from Japan, yet, as a rule, it can be purchased cheaply enough during the season.

L. SPECIOSUM, another of this class, will flower beautifully out of doors during the latter half of August and frequently for a long time after that. It is perfectly hardy, but is sometimes a little liable to die off suddenly after the manner of L. auratum, but not to anything like the same extent as that kind. The supplies of this Lily, of which numerous varieties can be obtained at a cheap rate in this country, are mainly drawn from two sources, viz., from Holland and Japan. From this latter country we get, as a rule, magnificent bulbs of richly coloured varieties, and also of that beautiful white form, Krætzeri. The varieties roseum, rubrum, punctatum, and album mostly come from Holland. The last mentioned, album, is totally distinct from the Japanese Krætzeri, the exterior of the flower being tinged with chocolate. Where herbaceous borders are maintained, a few good masses of this Lily in two or three distinct varieties form a very pleasing feature at a time when many of their associates are over, while bold clumps or beds, each consisting of only one variety, serve to show them to very great advantage. This is quite the poor man's Lily, and good examples may often be seen in cottage windows.

L. TIGRINUM, the last to mention of this section, is a very beautiful species, but as an ornamental plant the typical kind is greatly surpassed by the variety splendens. This particular form is generally very well done at Kew, and towards the end of last summer some large masses of it there were wonderfully effective. The double-flowered variety is very distinct and has some admirers, but most Lily lovers would, I think, prefer the single blossoms. It is, however, interesting as being the best example of a double-flowered Lily that we have in our gardens.

The sub-genus that contains the greatest number of species is that known as Martagon, the first example of which will be the species from whence this section has derived its name, viz.,

LILIUM MARTAGON, known also as the Turk's-cap Lily. The varieties of this species, though not particularly numerous, show as marked a divergence from each other as is to be found in any Lily, for first of all there is what is known as the common or purple Martagon, whose pretty little reflexed blossoms are of a dull purplish hue; then there is a variety with pure white flowers, and another, dalmaticum, which in some examples at least is one of the darkest of Lilies, the flowers being of a deep purple. The roots of these Martagon Lilies are very stout in proportion to the size of the bulbs and deep descending; hence they are more impatient of removal than most members of the genus. The first Lily of all to flower in the open ground is one of the Martagon group, viz., L. pyrenaicum, with small yellowish green flowers, which have a very unpleasant smell; indeed, this feature is common to many other members of this section. Hence, though they are exceedingly graceful and the spikes of blossoms just the thing for large vases, yet they are not available for cutting owing to the heavy perfume, but as plants for the open garden some of the best Lilies are included among them. That known as the

SCARLET MARTAGON (L. chalcedonicum) is a very striking Lily, whose sealing-wax-like blossoms are at their best in July, at which time very few outdoor Lilies are in bloom. This also greatly resents removal, and very frequently the first season after being transplanted it will only throw up a puny shoot without any signs of flower. This latter remark will also apply with equal force to

L. SZOVITZIANUM, a very beautiful Lily with a plurality of names, as, besides that just mentioned, it is also known as L. colchicum, L. ponticum, L. Loddigesianum and L. monadelphum. The flowers of this are usually of a primrose-yellow, spotted more or less with brown, but there are a good many individual differences. This Lily succeeds best in a good, deep, loamy soil, but at the same time it must not be at all waterlogged. The Japanese

L. HANSONI is a particularly desirable member of the Martagon group, as in the first place it is less affected by removal than any of them, and the colour of its flowers — bright orange, spotted with brown — renders it very distinct. The petals are unusually thick in texture, looking almost as if formed of wax. L. Hansoni is especially remarkable from the fact that, with the exception of the Madonna Lily (L. candidum) and that beautiful hybrid raised there from, L. testaceum, it is the first of all Lilies to push up its delicate leaves in the spring. The common Martagon is, however, close on its heels. A small bed of L. Hansoni near the back of the Palm house at Kew was last season very striking, there being quite a forest of spikes, each carrying a number of pretty blossoms. That interesting hybrid raised between L. Hansoni and L. dalmaticum, know as L. Dalhansoni, is just as amenable to cultivation as either of its parents.

L. TESTACEUM, just alluded to, is included in this group. The parents of this are L. candidum and L. chalcedonicum. The foliage is in general appearance about midway between the two, and much the same may be said of the flowers, their colour being a very pretty shade of nankeen. It is a vigorous Lily, flowering well in the open garden. Under the name of

L. POMPONIUM VERUM we have one of the brightest coloured of the early-flowering Turk's-cap Lilies. The leaves are very numerous, of a deep green, edged with white, and it is a Lily that will succeed even in stiff soils. The red form of L. pyrenaicum is often known as L. pomponium, hence the suffix verum to this greatly superior form. There are several species belonging to the Martagon group remarkable from their peculiar rhizome-like bulbs, and as a rule they need a certain amount of peat or leaf-mould in their soil. The roots of these are not particularly deep descending, and they require a fairly cool, moist spot; indeed, one species, L. superbum (known as the Swamp Lily), will succeed where the ground is quite moist. Two others belonging to this section are the Panther Lily (L. pardalinum) and L. canadense, both of which are very beautiful and variable in height and colour of the flower.

The Eulirion or tube-flowered group contains, among other species, L. longiflorum, one form of which, known as

L. HARRISI, is undoubtedly grown in larger quantities than any other Lily. This is, however, principally cultivated in pots under glass. From Japan, grand, well-ripened bulbs are now sent in considerable numbers, and they are the best of all the longiflorum section for planting in the open garden, where they will flower beautifully in most seasons about the first half of July. A sandy loam suits this Lily well, and when the conditions are favourable it will increase at a rapid rate. Several of its immediate relatives are too tender or too fastidious in their cultural requirements to succeed as garden Lilies, but exception must be made at least in the case of two, viz., L. Browni and the Madonna Lily (L. candidum). There seems to be an idea that L. Browni is tender, but such is not the case, and its fine bold flowers, ivory white inside and pale chocolate on the exterior, are very beautiful. Of the Madonna Lily, so generally recognised as the type of beauty, little need be said.

After this come the cup-shaped Lilies, all of which belong to the sub-genus Isolirion, and though there are not many distinct species, yet the varieties are numerous. A good illustration of this is to be found in

L. ELEGANS, or THUNBERGIANUM, as it is often called. In this the flowers vary from the pale buff-yellow of alutaceum to the deep blackish crimson of Horsmani, through various intermediate shades. Besides these two, some of the best varieties are pictum, Van Houttei, Alice Wilson, Prince of Orange, biligulatum, sanguineum, aureum marmoratum, and brevifolium. All of the above are moderately cheap, except Alice Wilson and Horsmani. A curious Lily is L. elegans staminosum or flore-pleno, as in this the interior of the flower is filled with flattened petaloid segments, thus forming a double blossom. While L. elegans belongs to the early-flowering Lilies, one variety—venustum, with apricot-coloured blossoms, very much like those of the Japanese L. Batemannæ—does not bloom till all the rest are past.

L. DAVURICUM or UMBELLATUM is a larger and bolder Lily than L. elegans, and not nearly so variable in colour, for different shades of orange-red predominate in the case of L. davuricum.

L. BULBIFERUM, for which generally some seedling form of L. davuricum is made to do duty, may be distinguished by the bulbils in the axils of the leaves. The flowers of this are of a warm reddish orange. The last of this group to mention and nearly the last of them to flower is

L. CROCEUM, which is too well known to need anything said in its favour. The members of this group of Lilies all do well in good sandy loam, and they may, as a rule, be depended upon to flower well the first season after planting.

Besides those above mencioned, the Himalayan L. giganteum is not nearly so particular as is generally supposed, while the charming L. Henryi, though of comparatively recent introduction and still far from cheap, has already proved itself to be a thoroughly good garden Lily.

H. P.

THE ROCK GARDEN.

XVI.

AUTUMN FLOWERS.

SEPTEMBER has been a glorious month this year, and its warm temperature and brilliant sunshine gave to our favourite flowers in the rock garden a brightness quite unusual for these islands. Unfortunately these glorious colours did not last long, and were mostly destroyed by the sudden and premature cold weather experienced in October, and by the subsequent abundance of cold rains during November. It is during these autumn months that flowers in the rock garden are doubly welcome. In June and July we have hundreds of varieties of gay flowers to choose from, but not so when the year is on the wane and autumn tints and falling leaves show the approach of winter. Flowers in the rock garden that will last from September till the end of October, or even beginning of November, are comparatively scarce.

In the following notes I will enumerate such flowers as I have observed in bloom during the time mentioned, and, as in previous notes on the subject, I will divide the plants into dwarf rock plants, medium-sized plants, and tall plants.

Dwarf Rock Plants Flowering in Autumn.

Senecio leucophyllus is one of the choicest and rarest rock plants. At Exeter it was still in bloom at the beginning of October. There it was planted in stony calcareous soil on the sunny side of a piece of rock. The plant was imported with several others from the Pyrenees, and represents the sole survivor. Plenty of sun and perfect drainage seem indispensable to its well-being. The plant is only a few inches in height; its leaves are pinnatifid and of silvery whiteness. The flowers are of a bright golden yellow, and though small individually they are very effective, as they are clustered together in a corymb of considerable size. Omphalodes Luciliæ bloomed here during the last week in September. This is another choice plant which all too often, unfortunately, perishes quickly in the British climate, but probably the drought of last summer suited its requirements. There is something very charming in the delicate pale blue corolla raised above the glaucous leaves. It is a first-class gem, and altogether different from the weedy Omphalodes verna, which does so well when naturalised in woods or other half shady places. Omphalodes Luciliæ perishes in the shade and requires the full sun. Another pretty rock plant which flowered here in September is Frankenia lævis. Though a British plant it is very seldom seen. It is an excellent rock plant, forming a very neat cushion of minute leaves close to the ground and numerously studded with bright rosy purple flowers. Lippia repens also bloomed in September in Devonshire. Owing to repeated failures with this plant I began to look on it as not being quite hardy in this country, but as it stood the severe test of last winter and is looking healthier than ever after the dry summer, I think the failures must be attributed to wet rather than cold. It forms a spreading carpet close to the ground, and its pale pink flowers are very freely produced, and show to special advantage if allowed to hang over a stone. Epilobium obcordatum was severely cut last winter, but it has fully recovered, and in September was flowering for the second time. It is one of the most graceful things in the rock garden for a position in which its pendent shoots and crimson-purple flowers can show to advantage. Dianthus alpinus also has flowered a second, and in some cases a third, time this autumn, and its beauty can hardly be surpassed. Cyclamen hederæfolium and other autumn-flowering kinds were blooming abundantly in September, and it is well known that they prefer a position at least partly shaded. Unlike most rock plants, they do not object to the shade of a tree or shrub, but, on the contrary, they prefer it. Œnothera pumila, with its dwarf habit and bright yellow flowers, was still in bloom on October 1. It seems to enjoy a sunny position and plenty of drainage. The same kind of position suits the beautiful white flowering Antirrhinum glutinosum, which during the last week of September was still in bloom. When planted so that its semi-pendent shoots can hang over a large stone this plant is specially effective. Among dwarf plants I will mention only two more, viz., Arenaria purpurascens (syn., Alsine rubra) and Sisyrinchium bermudianum. The former flowered in September (though its usual time of blooming is much earlier), and the latter was still in flower during the second week of October, though the usual blooming time is June.

Medium-sized Rock Plants Flowering in Autumn.

Arnebia echioides (the Prophet's Flower) was still in bloom in October. It is always an object of great interest in the rock garden and of very easy cultivation, thriving perfectly well in ordinary loam mixed with a few stones. On account of its size it is suitable for the larger ledges of rocks away from the miniature plants in the select part of the rock garden. Its large yellow flowers are made additionally interesting by the five distinct black spots (according to the legend, the finger marks of the prophet). The vanishing of these spots is one of the mysteries of plant life not yet fully explained. Can it be that the mission of these spots is to attract insects which would effect fertilisation, and that the vanishing of the spots is a sign that that purpose has been accomplished? It would be interesting to hear the result of the experience of other correspondents who perhaps may have observed this natural phenomenon more closely. Zauschneria californica has during this season bloomed from September till November. All through October its bright scarlet flowers were as gay as possible. For dry positions, so isolated that the fast-spreading Zauschneria cannot imperil smaller plants, no more effective autumn display could be desired. The same might be said of the brilliant blue Plumbago Larpentæ, an excellent companion to the former, which this autumn bloomed from the end of August till the beginning of October. Another most useful blue flower, though of less brilliancy than the last, is Campanula Portenschlagiana major (Paul's variety), also known under the names of Campanula bavarica and Campanula mollis. It is much larger than the ordinary C. Portenschlagiana, growing quite 10 inches high, and though it bloomed most profusely during June, it has produced a second lot of flowers, lasting all through September, so that it may well be counted among the autumn flowers. In my recent article in The Garden on Campanulas I gave a full description of this variety under the name of C. mollis, but having, by the kindness of the Rev. Wolley-Dod, been furnished with the history of that variety, there can be no doubt that this C. mollis is identical with C. Portenschlagiana major (Paul's variety). A pure but paler blue is furnished by Linum Lewisi, which somewhat resembles Linum alpinum, but lasted in bloom till September, together with its congener, Linum maritimum, which latter, however, is distinguished by handsome yellow flowers.

Of late-blooming pink flowers on medium-sized plants I will mention only Sedum populifolium, which requires a sunny position, Polygonum Brunonis, which is an effective plant for a half-shady spot in the rougher parts of the rock garden, and the charming Rhexia virginica, which requires a moist and shady position. The last-named is seldom seen to perfection, but its rosy flowers with their yellow anthers are most attractive. At Newton Abbot Rhexia virginica was still in bloom on October 11, but the finest plants I ever saw I noticed last August in the natural bog garden at Oakwood, where batches covering a square yard or more were then just coming into bloom. Saxifraga Fortunei is a choice rock plant not seen so often as it deserves to be. It flowered in South Devon during the latter part of September, and flourishes best in a somewhat moist and shady position. The large glossy leaves are leathery in appearance and have red stems, while the flowers are white.

Tall Autumn Flowers suitable for the Rock Garden.

Tall plants can of course be admitted only here and there as small groups, or as isolated specimens where special effect is desired, or in the margin of shrubberies forming a distant background to the rock garden proper. Gypsophila acutifolia, with its elegant white flowers, lasted till September. The scarlet and purple Lobelias, such as Lobelia cardinalis, L. fulgens, L. violacea and the numerous sub-varieties, also last till September and are very rich in colour. On account of their somewhat stiff and rigid growth they are scarcely suitable for the rock garden when planted close together, or even as isolated specimens. When, however, they are so arranged as to form large, loose groups, of irregular appearance, with the plants kept sufficiently apart to allow the full development of some dwarf evergreen such as Iberis, Campanulas, or kindred kinds that would carpet the ground between the Lobelias, the effect is charming. Many types of the tall Asters or Michaelmas Daisies lasted till October, but all erect-growing, tall kinds should, I think, be banished from the close vicinity of the rock garden, where they would only mar the picturesque effect. But such kinds as A. dumosus, A. Amellus bessarabicus, A. horizontalis, and others of more graceful habit might with advantage help to enliven the background of rock gardens during a season when flowers are getting scarce. One of the most elegant late flowering tall plants, and admirably suited as a single specimen on a large rock, is Desmodium penduliflorum. When planted on a somewhat high elevation the full grace and beauty of the long semi-pendent branches, laden with an abundance of rosy purple flowers in large racemes, are shown to the best advantage. As a rule it does not commence to bloom until September, and its elegant and showy blossoms last till late in October or even beginning of November. Salvia Pitcheri with its handsome deep blue flowers is another valuable autumn plant which here in the west may often be seen in bloom in the open as late as November if severe frost has not set in before that time. Not quite so late is the blooming season of the handsome tall yellow Thistle (Scolymus grandiflorus), which lasted only till the beginning of September, but is a striking plant, deserving greater popularity than it enjoys at present. Chelone obliqua with purple flowers, and its white variety C. o. alba, lasted till the end of September, while the tall and handsome Chelone barbata, with its long tubular scarlet-crimson flowers, lasted here only till the beginning of September. Another red, though of a duller shade, is furnished by Phygelius capensis, which lasted throughout September, and grows about 2 feet to 2½ feet in height. Of about the same height are the bright yellow Chrysocoma linosyris, whose large corymbs of golden flowers last till the beginning of October, and the handsome Senecio pulcher, with large bright purple flowers, flowering till the middle of October.

Elmside, Exeter. F. W. Meyer.

(To be continued.)

Bunch Primroses.—At the present time (December 3) I have a goodly number of plants growing in various positions, and those under a north wall are as free as those on a south border. During the last three or four weeks I have gathered two or three nice bunches weekly.—John Crook.

APETHORPE.

Among the fine old houses of Northamptonshire, Apethorpe, the seat of the Earl of Westmoreland, is one of the best examples. It stands in the middle of a small park of not quite 200 acres, a little to the south of the equally ancient village. The house, like others of its kind, is built of and roofed with stone, and where the walls are seen in parts between the free growth of climbing plants, they bear the mark of age in their Lichen-stained surfaces. Apethorpe is of large extent, a house that has grown with the times, but always after the simple, beautiful style of its earliest parts, which date back to the time of Henry VI. The oldest part is that seen in the right-hand corner of the accompanying illustration, whilst the large doors have evidently been at one time the chief entrance, no doubt later, when the house was extended round the four sides of the courtyard. The view here given is that of the courtyard, now a charming grass plot large enough for a tennis lawn, and with all the best rooms of the house looking out upon it, enclosing it on all sides. The archway seen to the left gives access to another spacious courtyard, round which are arranged the domestic offices. In the year 1603 James I., when on his way south to assume the crown of England, stayed at Apethorpe, and it was here he first met George Villiers, who afterwards became Duke of Buckingham.

The present entrance is on the east side, where a drive of fine breadth and graceful curve is margined with a broad sweep of turf that merges into the park, and the outlook is a pretty one, characteristic of the district, with the park and its trees in the foreground, beyond its boundaries the public road, from which the house is seen to great advantage. The south side of the house looks out upon a lawn of velvety smoothness, rising slightly to the distant Yew hedges and Ivy-clad walls that separate it from the fruit and vegetable grounds beyond. The chief feature of attraction upon this lawn is two lines of Yew trees, two parallel hedges in fact, with a broad rectangular plot of Grass between, once an enclosure of some sort. Now and for many years the hedges have grown wild and the trees are of sufficient height to admit of the removal of their lower boughs on one side, which has been done, giving charming shaded walks beneath spreading branches on the inner side of both lines. A Lebanon Cedar on the lawn and quite near the house was once of considerable height, but a storm rather more than thirty years ago broke asunder the main trunk at a height of about 30 feet. The lower and wide-spreading branches remained intact, and from these have started up a score or more of leading shoots as perfectly erect as though they were young growing trees. The tree is in the most perfect health; its main stem is over 20 feet round, and its branch-spread has a circumference of nearly 100 yards. On the south-west corner of the lawn are a few large flower beds and some long borders devoted mainly to hardy flowers, whilst the south-east corner merges into a group of conifers admirably placed at distances that permit of their unrestricted growth. The most conspicuous tree is a Wellingtonia, which Mr. Ewart, who has been gardener at Apethorpe over forty years, planted out of a pot in its present position in 1858. This specimen is now nearly 70 feet in height and its stem is about 12 feet round. There are also other thriving specimens of this tree, also of Thuja Lobbi, T. gigantea and other conifers. A plant of Salisburia adiantifolia is trained upon the walls of the house. It has a regular columnar stem 30 feet high, 1½ feet through at the base, and perfectly erect, whilst its thickness diminishes in a very slight degree in proportion to its height, the branches being trained out horizontally or in espalier form. The tree was probably planted soon after its introduction into this country, as Mr. Ewart said it was of large size when he came to the place, and might have been planted against the wall through lack of knowledge as to its hardiness.

The kitchen garden is surrounded and subdivided by fine walls and perfect Yew hedges, whilst the glass department consists of two vineries and two other houses that were gay with flowering plants at the time of our visit.



Apethorpe, Northampton. Engraved for The Garden *from a photograph by Mr. J. T. Hopwood, Bury Street, St. James', S.W.*

The Glastonbury Hawthorn. — A small standard tree of this early or winter-blooming variety is at the present time in full flower in the Botanic Gardens of Trinity College, Pembroke Road, Dublin. It was introduced several years ago direct from Glastonbury by desire of the Rev. J. W. Stubbs, D.D., who had seen this variety growing in the precincts of the abbey at Glastonbury when visiting that place some years ago. This tree has budded at Christmas-tide on several previous years, but it has never actually flowered during winter before this year. It flowered early in April of the present year and ripe fruits are now to be seen alongside the clusters of white flowers. The tradition or legend connected with the Glastonbury Thorn is well known. The original tree is said to have been

brought from the Holy Land as a walking staff by Joseph of Arimathea. On arriving at the site of the present abbey, he stuck his staff into the ground, where it budded and flourished as a living tree, astonishing the country people by flowering on old Christmas Day, which was held on what we now call Twelfth Day. When the change of style was made in the calendar of the Church, the people objected to it, and appealed to the non-flowering of the sacred Thorn tree as a natural protest against the new-fangled notions of time. This variety of Hawthorn is known as Cratægus Oxyacantha var. præcox, and was formerly much in repute amongst lovers of curiosities, but it is now rare in trade lists, and not at all common in gardens. It would be interesting to hear if it is now in blossom elsewhere in Ireland or in England at this inclement season of the year.—F. W. Burbidge.

Orchard and Fruit Garden.

RENOVATING VINE AND PEACH BORDERS.

Where Vines, Peaches, or similar fruit-bearing trees under glass are in an unsatisfactory condition or exhibiting indications of weakness, the present is a suitable season to take measures to improve the existing conditions by renewing the borders to some extent, and providing a better compost and more suitable root-run for the Vines or other occupants of the house. Provided the drainage is good, it is by no means necessary to make entirely new borders (in some cases no doubt it would be better to do so, but the expense deters many from such an undertaking), as much can be done by a judicious removal of a portion of the exhausted soil, replacing the same with a prepared compost containing such ingredients as will induce a fresh, active root action. The first step is to have the new compost all ready to wheel into the houses immediately it is required. There is always some delay, and if the weather is bad, still more time is lost; that is avoided by having everything ready to go on with beforehand. If possible, good fibrous turf from an old pasture should be procured, stacking it into a heap in the soil yard. A quantity of ashes from the burning of vegetable refuse, weeds, prunings, &c., is very desirable, taking care that all the wood is properly burned, otherwise fungoid growth might follow in the border. The ashes ought to be kept dry until required for use. If the natural soil is heavy and likely to set closely, a quantity of sharp sand will prove serviceable—such as accumulates at the bottom of a hill on the highway is first-class. Vine roots are especially fond of this sand, and will form a mass of fibre therein. Having chopped up the turf into fair-sized lumps and thrown out all the fine soil that may have been made in breaking up the lumps, add one barrowload of the ashes and one barrowload of sand to eight of the turf. If mortar or plaster refuse is available, a barrowload can be put with the above, or, failing that, two 10-inch pots full of bone meal can be added, thoroughly mixing the whole together and keeping it dry until wanted. My experience, again, when I took charge of the garden in my present situation may be useful to others similarly placed. I entered on my duties in the late autumn, and found the Vines, Peaches and Nectarines in a wretched condition, several eminent gardeners assuring me that I should have to root the whole lot out and make an entirely fresh start. Instead of following out the advice given, the Vines, &c., were cut well back and the borders were gone over with forks and the soil removed down to the roots, a few of which were fully exposed, then raised and spread out on the sods of turf just as dug from the field. On the top of these roots a quantity of sand of the description mentioned was placed, completing the whole of the borders in the same form, *i.e.*, with a layer of turf, then a layer of sand about 1 inch thick, repeating the process until all was finished, at the same time making all as firm as possible. No other material was used, as the soil is naturally porous. The result exceeded all expectations. By the following autumn excellent short-jointed growth had been made, and the borders were, and have been ever since, one mass of roots. I have great faith in sand in moderate quantities for Vine borders; its usefulness can be seen if any alterations are made in the borders after its use by the quantity of fine fibrous roots that have spread amongst it. There may be little strength in sand, but if the gardener or amateur can manage to get plenty of roots to any sort of fruit-bearing tree or plant, it is a very simple matter to supply sufficient nourishment to meet all requirements. At the same time, it is never advisable to commence feeding until the roots have taken thorough possession of the soil. After renewing the borders in the mode indicated, a mulch of strawy manure will be ample for the first year, and this mulch is not recommended for its fertilising powers, but simply as a check to the growth of weeds and grass that would otherwise spring up, and thus reduce the fertility of the borders.

W. G. C.

Forelle or Trout Pear. — This handsome Pear is always greatly admired when in good form, but frequently its handsome appearance is its best recommendation, especially if grown against a wall. No doubt the largest and best coloured samples are obtained from wall trees, but my experience is that they are always the worst in quality. I have tasted Forelle from wall trees in gardens widely apart and under very dissimilar conditions always with the inferior flavour very much to the fore. On the other hand, there is a marked difference in favour of the fruit from standard trees. Though naturally smaller and with less colour, the quality in every instance has been infinitely superior, so much better in fact that the variety would not be recognised by most gardeners who had not tasted it under the two different forms of growth. I think Forelle not worth its room on a wall, fairly good on bush trees, and very good on standards, on which excellent crops are produced if the trees are on good land and well manured annually.—G. C. R.

Pear Marie Guisse.—We are often told that more late Pears should be grown, and amongst various sorts recommended Marie Guisse is described as a valuable variety fit for use in March, with several other good qualities. After growing Marie Guisse as a bush, wall, and cordon tree in quantity for about eleven years, I consider it one of the most unsatisfactory Pears I know. Every year the trees bloom most profusely, make excellent growth, and appear all that could be desired as trees, but they very seldom bear even a quarter of a crop, and if they bore freely, the fruit is too small and poor in appearance to be of any market value. Manuring with chemical fertilisers suited to the soil and crop brings about very little improvement. Lime was recommended by a leading grower as a sure remedy for its shy-bearing, but all efforts in the way of improvement have failed. —W. R. H.

Mulching Raspberries.—This is often performed at the wrong season of the year. Many wait till spring, when the soil between the rows on stiff land is wet and cold from the winter rains. They then dig in a quantity of cold spit manure, mangling all the best surface roots, which every practical gardener well knows are the best. True, fair crops of fruit are produced even under this system and when the canes are crowded round stakes in the old-fashioned way, but the fruit is small and flavourless compared with that produced from canes rooting near the surface and trained to wires fixed to posts. I get the best results from thinning out all the old fruiting canes early in autumn, raking off the stale unused mulching, giving a good broadcast sprinkling of artificial manure and re-mulching with spent refuse from old hot-beds. Into this the new roots rush readily, and medium-sized fruitful canes are produced that will stand severe frost.—J. C.

Packing fruit trees.—I cannot help thinking that insufficient care is taken in packing fruit trees for despatching long distances, even by some of the noted fruit-growing firms. As a rule, the trees are laid in in perfectly dry straw without a vestige of damp material about the roots, the result being that on arrival at their destination they present a parched and dried appearance; and I know from experience that many of the fibrous roots are injured beyond recovery by this rough-and-ready treatment. When fruit trees are sold in market towns at a cheap rate one cannot expect any extra trouble to be taken with them, but surely firms who have a reputation to keep up would do well to spend a little time in enveloping the roots of each consignment in a little damp hay or strawy litter. I have been so much annoyed by the non-observance of this common-sense rule, that I now make a stipulation that moist material is to be used.—C. H. N.

Pruning Apple trees.—There has been a great deal of discussion lately in The Garden on the pruning of Apple trees, so I am sending by this post two photographs of Blenheim Orange Apple trees, showing how fruitful this variety is here with close pruning. I have pruned the trees for sixteen years and they have only failed once in that time to give crops of good fruit. The trees are now 7 feet high, and have been planted twenty-eight years. — Thomas Goldring, *Chilgrove, Chichester.*

*** They seem healthy and well-laden trees, but probably large, fully grown trees would under other conditions be equally valuable.—Ed.

Morello Cherries.—To "A. W.'s" advice to grow Morello Cherries as bush trees rather than on north walls, the obvious reply is that fruits on bush trees are seldom so fine as those produced on wall trees. So richly coloured, fleshy, and almost sweet do these fruits become on walls, that they are sometimes used for dessert and much liked. But I find it difficult to understand how it is that bush Cherries as advised to be grown should become so infested with aphis and need so much cleaning, whilst these same Cherries grown as standards do well, fruit well, and never seem troubled by insect pests. That is at least my experience, for near to where I lived in Middlesex there were growing and still are there scores of standard trees, some thirty years planted, that seemed to be always in good health, always clean, always carried good crops of fruit, and certainly never did get any cleansing. I know so much cannot be said of bushes. But, apart from this circumstance, is it not better to grow this Cherry as a standard than to occupy with it valuable space in gardens as bushes? There is no fruit tree, not even an ornamental Crab, that furnishes more beauty as a standard than does a Morello Cherry. It is a beautiful lawn tree. The head is never unduly large and is always naturally of drooping form. When in bloom the trees are masses of snow-white flowers, and when in fruit in the summer are rich with colour. Birds seem very chary of attacking the fruits. In the neighbourhood of the market orchard referred to they were numerous, but the grower always gathered his fruit fully ripe and sound. Even if birds did have some of the fruits, might such feeding not keep them from doing harm elsewhere? Trees on walls not only can be very easily protected, but the fruits can be preserved on them far longer than could be the case with bush trees.—A. D.

RIHA'S CORELESS PEAR.

The principal merit of this new variety consists in the perfect absence of the core, there being only some feeble marks of it left, combined with a first-rate quality. It is a large pear-shaped or conical fruit with a greenish yellow skin, which is more or less covered with fine dots of a delicate cinnamon-coloured russet. The flesh is white, tender and melting, very juicy, sweet, with a rich flavour. It will no doubt prove a valuable Pear for canning. It ripens in November and sometimes at the end of October, and if carefully treated will keep to the middle of December. The tree is a very good grower and an abundant bearer. Taking it altogether, this new variety highly deserves to be classed among the best of autumn Pears.

Berlin. L. Spath.



Riha's Coreless Pear.

Plum growing. — The successful Plum tree, says Mr. S. D. Willard in the *Rural New Yorker*, is one of moderate growth in the nursery, on a soil that has not been over-stimulated for its production, has been planted with care, cultivated and grown intelligently by a man of sufficient liberality to bestow upon it the same liberal treatment that would be given to a thoroughbred animal—*i.e.*, protected, cared for, and fed with consideration up to such time as a bounteous crop of fruit may have matured ready for harvesting. This should be picked and handled carefully, in baskets provided especially for this purpose, and in them transferred to the packing house or barn, where it should be assorted and graded carefully as regards size and quality, all being so nicely done that the producer would feel proud to have his name appear upon the package to whatever market it might be shipped. The product thus handled, finding its way into the hands of an honest city commission man, will furnish convincing proof of the fact that there are successful Plum trees. Plums and Currants make a good fruit team, but it must be remembered that both require the best of care.

Apple Red Astrachan. —How very seldom we see this Apple mentioned, the reason probably being that few can give it a good name. So far as the individual fruit of Astrachan goes, there is no fault to find with it, but its great drawback lies in the tree refusing to bear, and this in spite not only of rigid root-prunings, but also of lifting and removal to fresh quarters. It is not that the tree makes extra strong wood, as in my case it is only of medium thickness and is tolerably well furnished with spurs, but the latter are minus bloom buds. The few fruit the tree under my charge has borne was produced on shoots about 6 in. long. This fact led me to think that, like Irish Peach and Worcester Pearmain, this was its natural way of fruiting, but although all the short, sturdy growths have been left at the summer pinching, no more fruit has been secured. I may add that I have only had experience with it on a wall and espalier. Perhaps some reader of The Garden can speak of it as an orchard tree.—J. C.

EXHIBITING PEARS.

A very proper and needful plea is that put in so forcibly by Mr. Parker in favour of stewing Pears. Our methods of judging Pears at shows very forcibly illustrate the readiness we have to run after appearance instead of quality. Many Pears to which prizes have been awarded at autumn exhibitions would, if cut open, show that, in spite of apparent solidity and fitness, the germs of decay are already apparent in and about the core, and that the end of these fine fruits was near. Stewing Pears, such as Uvedale's St. Germain, Catillac, Gen. Todtleben, and Vicar of Winkfield, will, as a rule, keep long and sound, the two first especially. They may be used at any time from their first gathering to the latest in the season, and in a properly cooked condition make the most delicious of fruit that is conceivable. Dessert Pears may not be used till ripe, and when ripe their days of usefulness are indeed few. Even when had, how many are but soft, buttery pulp with little flavour, whilst stewing brings from out these large hard, enduring varieties the subtlest and richest of flavour that cooked fruits will give. Why, then, are not stewing Pears, if of good size and relatively handsome, not to be regarded as in every sense as worthy of consideration in collections as are any other varieties? Where there are no special classes for them, judges should be instructed to favour the presence of one or two dishes in collections, according to numbers. That is a degree of recognition which every gardener will admit they are entitled to because of their exceeding usefulness. In ordinary Pears, where stewing varieties are not shown, I note that judges invariably go for ripeness, even though that element is not specified. I cannot understand why that feature should be required wholly. What can be more unfortunate in relation to dessert Pears than having half a dozen varieties, perhaps all good, yet ripening off at the same moment; what waste inevitably results? Would it not be far better were judges to require in a collection of, say, six dishes, that these should follow each other in maturing, and that all varieties ripening at once should be regarded as undesirable? If Clapp's Favourite and Marie Louise be associated with Doyenné du Comice and Glou Morceau, with perhaps a couple of others intermediate in ripening, even though some be quite green and hard, yet well-grown, would not such a collection be much more worthy of an award than one in which all the fruits were ripe, perhaps over-ripe? Collections of Pears shown for flavour alone are more difficult to obtain, because, to test flavour, all must be ripe at once. One, or at the most two varieties shown specially for flavour are sufficient at a show, because any good selection of best flavoured sorts should have a long ripening range. It would never do, however, to take flavour in any shown variety for granted, whatsoever may be its reputation. Pears are somewhat uncertain in quality, varying very much according to soil, situation, stock, or manner in which grown. For that reason judges would have to taste one fruit at least from each dish. I am not sure whether, in the case of all dessert Pears, it would not be a good plan to cut one fruit from each dish right through the centre, to test condition, as fresh handsome-looking samples may often under such tests prove to be either in a state of premature decay, or gritty. Tests of this sort, if strictly applied, might in time do much towards creating higher requirements as to the eating qualities of Pears.

A. D.

Black fly on Peach trees.—At page 434 the question is asked how to destroy this pest on Peach trees. "W. I." in his reply is certainly too daring in his recommendation to use petroleum for syringing the trees. Few gardeners would ever attempt it at this season of the year, no matter how well it was mixed up. What "W. I." recommends in the remainder of his article is certainly better, but for the sake of a little more time it would be equally as successful and no risks would be run in injuring the buds, which must certainly be the case if syringed, by going over the old wood and between the buds carefully with the solution recommended. I would advise "Subscriber" by all means not to syringe his trees. I do not say it without reason, for some six years ago I saw a house of Peaches which received such a check, that complete failure resulted the following year. Should "Subscriber's" trees be infested again next summer by this pest, let him syringe his trees well in the afternoons, and then go over the shoots affected with some good tobacco powder, using a distributor or puff to do so. If this is done when the foliage is wet and continued for a week or fortnight, he will soon rid them of black fly. The great secret of success in Peach culture can be summed up in a few words: Extreme cleanliness, good loam, and plenty of water at the roots, keeping the foliage thoroughly (not half) syringed at least once or twice a day. It is from neglecting the latter that so many failures arise with Peaches.—Geo. Burrows, *Berwick Gardens, Shrewsbury.*

Grape White Tokay.—This Grape is by some described as a coarse one, but this condition generally arises from the Vine being grown in too little heat. If grown in an ordinary cool vinery and started late, the berries never assume anything but a greenish white tint, and the flesh is then decidedly coarse. When favoured with a Muscat temperature, however, and ripened by the first week in September, White Tokay is a Grape of no mean order. It will hang in a plump condition long after the Muscats in the majority of gardens have shrivelled. The Vine has a good constitution and crops best when growing in soil the reverse of rich. This last condition is necessary in the case of all the large late varieties of white Grapes such as White Nice, Trebbiano and Syrian. A shallow border composed of a medium loam, with a large percentage of mortar rubble, produces a hard lateral growth, which ripens early and well, and is the only remedy against barren laterals, so common in these varieties. Some of the finest bunches of this Grape I have seen for a long time were hanging last September in a lean-to vinery at Rackheath Park, near Norwich.—J. C.

PRUNING PEACH TREES IN THE OPEN.

Mr. Young, Mr. Clarke and other advocates of early pruning will readily admit that the practice is not general. The finest Peaches ever seen by me on open walls have been from trees pruned late in the spring, after they were coloured over with the opening bloom. In healthy trees there is no serious loss of vital force or sap through this late pruning. No doubt gross or imperfectly ripened Peach wood is the first to fall a prey to frost or severe cold. But cold by no means selects all its victims from unripened shoots and branches; there are others—and far more numerous and valuable ones—that may be saved or lost through our time of pruning. In general terms, prune Peaches in the open air early; they will grow and blossom earlier—in the ratio of the date of their pruning—atmospheric conditions, site and soil being equal. This very potent fact in the production of fine Peaches in the open air seems wholly left out of the reckoning by Mr. A. Young. The late pruner secures a later bloom than the early pruner, and in our capricious climate a week or a fortnight's difference in the season of blooming often makes all the difference between food for frost and luscious melting Peaches for table or profit. Until Peach blooms open they are virtually safe in our climate. Hence every hour, day and week we can defer the blooming period by late pruning and other expedients, we increase our chances of a full crop of Peaches and Nectarines from the open wall. This is less a matter of theory but of fact demonstrated in different counties and gardens for years. I know of few things more likely to arrest the rising popularity of Peach growing in the open air than the declaration that the time of their final pruning is immaterial, or rather that the earlier the trees are pruned after the fall of the leaf the better. To this I advise the direct opposite. The later the spring pruning the later the blossoming, and the surer and more certain the crops. I have hinted at other methods of retarding the blossoming of Peaches in the opening besides that of late pruning. One of the simplest and most potential is the unnailing of the trees early in the autumn, gathering the branches into loose bunches, and wintering them, as far as safety and convenience admit of, from the wall surface with all its incessant alternations of temperature and enervating effects on the shoots backed so closely against the bricks. A few stout stakes thrust in a foot or more from the wall surface to which the trees can be fixed in sections will enable Peach growers in the open to combine two things essential to the highest success, viz., the uniform maturity of all the fruit-bearing wood and the retarding of its blossoming until the latest possible moment. D. T. F.

Apple Winter Peach.—It would be interesting to hear something as to the quality of this this year. As a rule it may be termed good in this part of the west of England, but this season it is very poor indeed and unfit for dessert. I never had such a good crop or such fine fruit, and was rather proud of the extra large and beautiful fruit, but on testing some before sending them in for dessert, the flavour was so wretched that all will go to the kitchen for cooking. The tree is a free bearer, the fruit large for dessert, very pale in colour, sometimes flushed on the sunny side, and keeps well until February.—W. R. H.

Apple Cathlin Pippin.—I am frequently requested to give a list of small dessert Apples that will keep well into the spring. A really good, but comparatively little-known variety for this purpose is Cathlin Pippin, which is occasionally seen at some of the fruit exhibitions, where it always attracts attention by its very distinct bronze colour. The flavour is very distinct and rich, and at its best during the first two months of the year, though occasionally it is excellent in March and April. Worked on the free stock, it has not cropped very freely, but on the Paradise stock the produce has been heavy and continuous. Those who desire a pretty and delicious little dessert Apple at the period mentioned will find this variety satisfactory.—W. G. C.

Unnailing Peach trees.—The practice of unnailing Peach trees on open walls in December or January is a very old one, but I think there is greater need for practising it now-a-days than formerly, when our winters were colder and more uniform. Those only who have had experience with open-air Peach trees know what excitable subjects they are, and, strange though it may seem, the more immature the wood is, the quicker the trees start in mild springs. This is doubtless partly accounted for by the fact that the roots of Plum stocks, on which most Peach trees are worked, are never quite dormant, even in mid-winter, young quill-like roots being often discovered when lifting trees at that date. The chief reason for unfastening Peach trees is to bring the bearing shoots away from the bricks, which sometimes become warm from the sun's rays even in January and cause the buds to expand.—C. C. H.

The winter moth.—So far as my experience has gone, the winter moth commits most harm on standard trees and where standing thickly. Where individual trees are, the harm relatively has been materially less. By far the worst form of depredation has been seen in large orchards, where several acres of trees have been stripped of every leaf. That form of defoliation is, however, rare even where, as in Middlesex, for instance,

orchards of standard trees are thick and old, yet not only is nothing done to check or prevent the access of the female moth to the trees by the aid of grease bands, but very little indeed is known of the remedy. Only a few days since, talking to an old fruit grower there, he regarded the information given on this head as something absolutely new. That fact illustrates the immense difficulty there is in getting practical information into the heads of men who hold to ancient ways. But seeing that modern fruit culture, so far especially as Apples are concerned, now centres largely on bush trees which seldom have any clean single stem round which to fix a grease band, it would be interesting to learn whether "W. G. C." or any others who have had experience of such trees and the winter moth any such bands can be utilised successfully in their case. Perhaps it may be said that because bush trees are readily accessible, the clusters of eggs or the live caterpillars may be gathered ere much harm is done, or the trees can be effectively sprayed. That is so, of course, but if the grease band can play no useful part in their case, then, as regards them, the applying of grease bands is more difficult than in the case of standard trees. Do not constant stirring and frequent manuring of the soil about trees, especially where they are not too densely planted, do very much to counteract moth attacks?—A. D.

APPLES FOR KEEPING.

In looking over the stock of these towards Christmas one is inclined to ask the question, where are those huge specimens that occupied the shelves some time ago? Fortunately, however, there are others still remaining that remind us of the past, and amongst these may be mentioned Lane's Prince Albert. This Apple is as sound now as when gathered from the trees, and though it does not possess that enticing colour to be found in some others, it is nevertheless one of the best that we have, taking it all round. Hanwell Souring will compare favourably with many others, though perhaps the name is against it. The fruit of this variety is unusually fine this season and with a brighter colour than I have ever seen, although the crop was a heavy one. To my mind this should be classed amongst the best keeping Apples we have. It certainly is one of the most reliable for cropping, for during the last eighteen years the trees have never failed to bear a crop, though in some seasons the yield is heavier than others. Wellington is again first-class and should occupy a place in every garden. Baumann's Red Reinnette is another that will no doubt become very popular. It is a good cropper, the fruit of splendid colour, and appears to keep well, for it is as sound now as when gathered. Hambledon Deux Ans is certainly one of the best long-keeping Apples we have, and at the same time a good cooker. This variety is much grown in some of the midland counties, and where it does well there is not a more profitable Apple to be found. I remember seeing a tree at Oaken, in Staffordshire, that bore thirty bushels of marketable fruit one season. Then again there is that good old variety Alfriston. The finest lot of fruit I ever saw of this was grown about three miles north of Chesterfield, in Derbyshire. There was not a single specimen amongst them that would not have turned the scales at half a pound. It was raised in the adjoining village to this many years ago, and though on stiff cold soil the trees are apt to canker, it is nevertheless well worthy of a place in all gardens. Yorkshire Greening is also one of those that ought to command a place in our orchards, for though the tree has a somewhat rambling habit, it may be kept within bounds without undue pruning. With me this has never failed to produce a crop, and as it keeps sound till February, it may be classed as a late variety. Norfolk Beaufin may not be one of the most prolific, but it is certainly one of the best keepers we have, and on that account should be accorded a place in every private collection. The fruit this season is of exceptionally fine quality, and carrying more than an ordinary amount of that bronzy colour so peculiar to this variety. Neither should we by any means neglect to plant such old favourites as Northern Greening and Easter Pippin, for though there may be others with a more showy appearance there are certainly none that are more useful in the kitchen during April and the early part of May. We are too apt to plant Apples and Pears for their fine appearance, but it should be remembered that fine fruit in October and November will not prevent the cook from complaining after Christmas if there be no supplies forthcoming. Horticultural societies have done well to encourage the growth of fruit, but they would certainly do a very great service if they would encourage the production of long-keeping varieties of Apples and Pears and appliances for their preservation. It has for some time been known that such plants as Lily of the Valley and many of our hardy early spring flowers may be kept back in order that their blooms may be made to expand in the autumn months. Why should not our fruit rooms be fitted with appliances whereby they may be kept cool enough to prevent the supplies from premature decay, and so prolong the season till other fruits are ready for use. Most gardeners know that April and the early part of May are the two worst months in the year to furnish the kitchen with a change of fruit for tarts, etc., but if by means of appliances similar to those used for retarding the growth of plants, they could preserve fruit, there would be no difficulty experienced in this respect. We all know the advantage of a cool cellar in summer, how that many tender fruits, such as Peaches and Melons for example, may be preserved for several days if taken into them before fully ripe. We seem to have overcome the difficulty of importing soft fruits by such means provided the journey is not too long, then why should not we be able to preserve our own productions in the same way? We complain much about foreign competition, yet when we have an abundant supply of home-grown fruit it seems to go begging, while that from distant lands commands the market, whereas if the former was properly husbanded there is no reason why it should not find most favour. H. C. P.

Uckfield.

SHORT NOTES.—FRUIT.

Coe's Late Red Plum.—This is a wonderful cropper, and keeps a long time. I have some still fit for kitchen (December 5) from a tree growing on the front trellis of an orchard house.—John Crook, *Forde Abbey.*

Plum Dymock Red.—This dark red Plum is extensively grown in the Dymock district of Gloucestershire, and is considered one of the best and most reliable market varieties grown. Perhaps some reader who has grown it and Smith's Purple Prolific will state if they consider the two distinct. Grown under similar conditions, I am unable to detect any difference.—W. G. C.

FERNS.

ADIANTUMS IN WINTER.

Most of the Adiantums require some care to keep them in good condition throughout the winter. Those which are required to give cut fronds and those to be used for decoration will need careful management to keep up a regular supply. It is easy enough to keep up a good supply up to Christmas, but it is during the first two months of the year that the supply often falls short. To provide against this, some plants should be kept in cool frames during the summer, and then taken into warmth early in the autumn. The plants will then get a fresh start and make good fronds, which will mature and keep fresh until those that make their spring growth are ready for use. Many of the Adiantums will continue under favourable conditions to make growth throughout the winter, but most of the cuneatum type are better of a rest. Such plants as are not likely to be wanted until late in the spring should be kept cool and moderately dry during the autumn; they will then start away freely if given a little more warmth early in the year. Where the pots are well filled with roots, a little liquid manure or a slight sprinkling of any of the artificial fertilisers will be very beneficial at this period.

In growing on Adiantums for cutting those that have well filled the pots with roots will be found to make the best fronds; they should be grown as fully exposed to the light as possible, and should not be crowded together. More good fronds will be obtained from a less number of plants where they have plenty of room. Although those of the cuneatum type do not require a high temperature, a sudden change is sure to prove disastrous. Such as have been gradually hardened off after the fronds are well matured will not suffer unless actually frozen, but if taken from a high temperature, a slight exposure to cold will cause them to turn black. This will not show immediately. It may be some days if kept in a cool house, but if put into heat they will very quickly change colour. I find Adiantum elegans is much hardier than cuneatum, and makes growth in winter better than the old favourite. A. elegans also makes rather larger fronds, and though it is doubtful if it will ever entirely supersede the old Maiden-hair, it is certainly more useful for some purposes. Of large-fronded sorts which may be recommended either for cutting or as plants for decoration, A. Colissi is one of the best; the large spreading fronds have medium-sized pinnules, and these are somewhat distant, giving it a very light appearance. A. scutum is another valuable Maiden-hair, as it stands well either as a pot plant or when cut. A. Williamsi will be found to be of great service in winter; one drawback, however, is that the pinnules drop off, especially from the older fronds. It is remarkable that this distinct Adiantum, though it appears to produce good spores freely, is very difficult of increase. It may, however, be easily propagated by dividing the rhizomes. H.

THE CLIMATE OF THE ISLE OF WIGHT.

I think that we may feel greatly consoled by the comparatively little injury which the most severe season we are ever likely to have was able to bring upon us. Nor is this an opinion which I am singular in holding. Some two or three months ago I paid a visit to Major Gaisford, at Offington, near Worthing, whose interest in matters of this sort is very great indeed, and his knowledge is on a par with his experience. It may be doubted whether there is any garden in the whole kingdom which is more noticeable than his for rare and beautiful shrubs. He has somewhere about seven hundred specimens of the very best sorts that can be procured, which have been gathered together with great skill from all parts of the world, and at much expense and trouble. Now, what struck Major Gaisford more than anything else about last winter was this—the comparatively little harm it did his trees. I think he said that he had not lost outright more than four or five per cent. of his very valuable collection, which, of course, means that he has only some thirty or thirty-five gaps out of seven hundred ornamental trees and shrubs which he possessed. Can anybody weep over that and not rather say that it is a very striking fact, and one that all gardeners should be ready to take to heart? Of course, a great many more than thirty or thirty-five specimens were knocked about and rather mauled by the cold, but this only implies in very many

cases the loss of one season for blossom, and it may be forty or forty-five years before such an ordeal comes upon us again. At any rate, that length of time has elapsed since we passed through the like. Now, what applies to Worthing, applies *a fortiori* to the Isle of Wight. I am not comparing my garden with that of Major Gaisford, for it would be very foolish to do so, but I can see from looking at his things and my own that, good as the climate of Worthing is for vegetation in general, that of the Island is better. At any rate, I would not exchange climate for climate and soil for soil. A loss, therefore, of only four or five per cent. of rare and valuable shrubs in a winter like that of 1894-95 should invite gardeners to be more enterprising, more trustful, more given to make experiments than is generally the case. I do not believe that in my own garden I have lost more than one or two shrubs and trees from the effects of the cold, and I mourn over Acacia dealbata and Eucryphia pinnatifida more than anything else. And when we speak of losses, let us not be slow to bear in mind survivals as well. Some persons so exclusively fix their minds on some two or three things which have slipped through their fingers that they forget altogether to register what may now be called safe beyond all doubt. For here is the good which a severe winter has done for us. It draws the line of safety in the clearest possible manner, and we may calculate that anything that is alive now has not much to fear in the future, unless one thing happens which it must be left to time to reveal. It must be admitted, of course, that if we are to have a cycle of winters like the last, and they are to come on us one after the other in very rapid succession, then trees and shrubs will go down in large numbers around us, for they will feel the second winter more than the first, and the third more than the second, and so on, and no one could say how bare and naked we shall be if this sort of thing is to continue. "But sufficient for the day is the evil thereof," and, so far as our own lives tell, an ordeal like that we are suffering from is only to be expected once in about forty or forty-five years. This is what the past says to us, and, of course, if the future is to be unlike the past we can draw no conclusions whatever, but if things are to be as things have been in recent years, we may be comforted and not discouraged by what we have met with of late. Here in my garden it is now a matter of perfect certainty, unless we have a new dispensation, that such a magnificent climber as Mandevilla suaveolens, which is generally grown in a greenhouse, will live and do well in the open air in the Isle of Wight. Here also a shrub from Mendoza, in South America (Poinciana Gillesi), which is grown in a pot in the temperate house at Kew, and does little there, but whose beauty, alike for foliage and for blossom, cannot be exaggerated, did perfectly well. It is now about 20 feet high, and it seemed to quite laugh at the very worst an English winter could do for it. No one had thought of such an occurrence, but anyone can see it when in bloom by passing through my gates. And so with many other things. Camellias have proved themselves to be much more hardy than Laurels, and shrub after shrub is now bearing witness to this. On the whole, therefore, what has been saved from last winter speaks much more loudly to us than what has been lost. There is no saying what the Isle of Wight can accommodate, because it has never been properly tried, but if any conclusions are to be drawn from the winter of 1894-95, either at Worthing or here, they are immeasurably on the side of encouragement, and there is nothing to deter us—certainly nothing to deter any gardener from widening his field of work, and from trusting he may succeed with a large number of trees and shrubs of a most ornamental description if he only gives them a chance. —Henry Ewbank, in the *Isle of Wight Observer*.

Garden Flora.

PLATE 1046

THE CROWFOOTS.

(WITH A COLOURED PLATE OF RANUNCULUS LINGUA.*)

The Crowfoots, to which the subject of the coloured illustration belongs, are very important in the hardy flower garden, where free-flowering plants are always welcome. From the early spring-time until late autumn the beds and borders are in a large measure indebted to one or more of the many species of this remarkable genus. The alpine meadows, almost on the verge of perpetual snow, are carpeted with their large white and yellow cups, the valleys are also brightened with their golden flowers, and even the watercourses remind one, as evening falls, of a fairy garden, the large, bright yellow cups of R. Lingua helping to keep up the illusion. R. Lingua is a semi-aquatic species and a native of Britain. It should be largely planted wherever it does not occur naturally. It requires very little care to thoroughly establish it, although well repaying any extra trouble taken with it. In shallow water never more than a foot in depth at most it will be found quite at home, and even on the edges of large watercourses or lakes it may be established with fine effect. Its large handsome flowers are a welcome change to what is too often a dreary waste. It grows in great abundance on the banks of the historic Kelvin.

On the margins of ponds or rivers it may be intermixed with such as R. aconitifolius and the better forms of R. acris, as also the nearly allied Marsh Marigold (Caltha palustris) and the various species of Globe Flowers, all of which are showy and suitable for such positions. Indeed, there is no reason why a large and beautifully natural flower garden should not be made on the water edge as charming and interesting as our much-admired mixed borders and a great deal less troublesome. R. Lingua and most of its allies may be increased freely by division or seed.—D. Dewar, *Botanic Gardens, Glasgow*.

——The genus Ranunculus is a very large and comprehensive one, and, in common with other large genera, it contains many species that to the gardener are worthless, while many others deservedly figure among the choicest and most valued plants of the garden. Regarded as a whole, while inhabiting a somewhat wide area, the majority may be said to be of quite easy culture and amenable to our English climate. This is even true of the many choice alpine kinds, which in reality are the gems of this genus, and include some of the rarer species that are none too plentiful at the present time. For the sake of convenience, for reference, and more particularly for dealing with the cultural requirements of the species, I have roughly grouped them under distinct heads in the following order: 1, moisture-loving; 2, alpine; 3, herbaceous; and 4, florists' kinds. The first group has its representative in the accompanying plate; the second includes those, mostly of dwarf habit, from the higher mountain-ranges, such as glacialis, alpestris, &c.; the third, those of taller growth, that renders them more suitable for the herbaceous border; while the fourth embraces all those varieties which have had their origin in R. asiaticus, and which now play an important part in the embellishment of our gardens in spring and early summer.



The Rockwood Lily (*Ranunculus Lyalli*).

Moisture loving Species.

Ranunculus aquatilis.—This, perhaps one of the prettiest of our aquatic weeds, is found in abundance in many parts of Britain—in ponds, or on wet, marshy ground. The broad sheets of its pure white blossoms are very effective in the full sunlight. It spreads rapidly, however, and when introduced into small areas will have to be kept within bounds. The plant flowers profusely for three or four months, usually beginning about the middle of May.

R. lingua (the greater Spear-wort).—This is also a native of Britain, but by no means so common as the last-named species. It is not too much to say that it is among the handsomest of water-side plants, delighting to send down its dense fibrous roots into the wet, loamy soil usually found in our English marshes. The flowers are nearly or quite 2 inches across, yellow, and, as

* Drawn for The Garden at Graveteye Manor by H. G. Moon. Lithographed and printed by Guillaume Severeyns.



will be seen by the accompanying plate, are produced in profusion. In heavy soil at the margin of the lake or pond the plant grows quite freely. the flower-stems rising to 2 feet or 3 feet high



Florists' Ranunculus.

The plant is deserving of more attention, as we have none too many of these summer-flowering aquatics. I say aquatic (even though the plant is strictly a water-side plant) because it may be grown in pots, pans or baskets in loamy soil if partly submerged. And in this way the artificial pond in the rock garden or similar place may have its share in the summer of this beautiful plant. The artist has given us in the plate a genuine bit of Nature by his happy association of the Water Forget-me-not (Myosotis palustris) with the Ranunculus in question, as pleasing as it is real. The two are perfectly happy together, making a very charming picture when seen in good condition.

R. Lyalli (Rockwood Lily).—This is also called the New Zealand Water Lily; but, call it what we may, there is only one opinion concerning the plant, viz., that it is at once the grandest and noblest of its race. It is this in its every aspect—its foliage, its flowers, its great height, in all these a giant indeed. On its introduction doubts were entertained concerning its hardiness, but these are gradually being dispelled. At Kew a plant has stood out for two seasons, but I am not sure whether it has survived the winter of 1894–5. Should it eventually prove perfectly hardy in this country, it will make a grand object in moist, shady nooks in the bog garden or similar place. The flowers are waxy white, with a cluster of yellow stamens in the centre, and often 4 inches across. Its giant leaves are from 12 in. to 16 in. across, thick and leathery, and borne on stout petioles. The branching stem reaches a height of 3 feet or 4 feet in established plants. Many of the species are easily raised from seeds, but with this remarkable and handsome plant there is yet some difficulty. This no doubt will in time be overcome. At any rate, no plant in this great genus is more worthy the fullest attention of the cultivator at the present time.

Alpine Species.

Under this head will be found the best of the dwarfer species, the majority of which will be suitable for the rock garden by reason of their dwarf stature.

Ranunculus alpestris.—A true alpine plant of about 4 inches or 6 inches high, with pleasing shining tufts of dark green, roundish, cordate, and sometimes trifid leaves. The plant usually inhabits a calcareous soil in its mountain home, but under cultivation this is not absolutely essential to its success. The flowers are pure white and large in proportion to the growth of the plant, with a cluster of yellow stamens in the middle and usually produced singly on erect stems. It is a fine plant for the rock garden, growing freely in loam, peat and leaf soil in about equal parts. It should be kept moist during the flowering season, which usually begins about June. Native of the Pyrenees and other parts.

R. amplexicaulis (Stem-clasping Crowfoot).—This is one of the best of this genus, and, happily, one of the easiest to cultivate. The plant grows from 6 inches to 12 inches high, the latter only when well established and in good positions. What I have found to suit it best is a compost of peat and loam in about equal parts, planting in a shallow depression where it is always moist. This species and parnassifolius are excellent companions for Corydalis nobilis and the Dentarias, and under these conditions they grow freely. The flowers, produced several on a stem in the early spring months, are of a glistening white, with yellow centre. Seeds are frequently produced, and a good stock may soon be raised. I have often seen this plant on a very dry bit of rockery, but in such places the plant only exists, and would be infinitely better suited in the drier portions of the bog garden or with the plants above-named. It is a native of the Alps of Europe, Provence, Apennines, Iceland, and on the mountains of Leon, in Spain, always in high, moist, rocky situations. Under cultivation moisture seems essential.

R. anemonoides.—Another true alpine, often not more than 3 inches in height though when



Ranunculus glacialis.

well established in favourable positions it may sometimes be double that height. A large number of these dwarf-growing species require some time to become established, and for this reason care should be taken to plant them in positions and material best calculated to make them a success, and then allow them to develop and display their charms. The species under notice is one of these. This in some degree is perhaps due to the very small pieces obtainable; but when well established it is one of the most charming plants of the rock garden. What it appears to love best of all is a deep fissure of very gritty loam, with leaves and peat, the latter not absolutely necessary, but helpful in securing in summer-time a condition of coolness that many of these tiny mountain plants delight in. Many of the kinds are greatly assisted by planting their roots in contact with pieces of sandstone rock placed just below the surface. A tuft of this plant, or, better still, a group in early spring in flower constitutes one of the choicest bits of any rock garden flora. The flowers are each about 1½ inches across or nearly so, and are white, tinted with rose-pink, thus forming an exquisite mixture. The charming little plant inhabits the Styrian Alps, Tyrol, &c.

R. glacialis.—As may be inferred by its specific name, this species inhabits the loftiest mountain ranges near the limits of the eternal snow. The plant grows about 4 inches high. The leaves are fleshy and of a dark green hue, the upper ones sometimes covered with hairs. The flowers are of a reddish hue suffused with purple, and may readily be distinguished by their very hairy calyx. The plant succeeds best on the higher and more exposed parts of the rock garden in gritty loamy soil, and should be kept moist during the summer. It is quite probable that under cultivation the above plant would succeed best in quite moist spots, as from its position in its mountain home it must be daily supplied for months with moisture from the melting snow. Alps, Pyrenees, and European mountains generally.

R. gramineus (Grassy Crowfoot).—This species is scarcely an alpine, but is included in this group by reason of its dwarf habit. It is about 1 foot high, and is usually surmounted by two or three flowers of a bright yellow. It is better suited for the woodland or wild garden (as it does not figure among the choicer kinds), and for this reason I briefly refer to it here. The plant is sometimes found in Wales in the higher pastures, but always in dry ground. A native also of Southern Europe.

R. montanus (Mountain Crowfoot).—This species is of very easy culture in cool, shady places in ordinary sandy loam. The plant grows about 6 inches high and has bright yellow flowers, each about three-quarters of an inch across. The flowers are borne singly on the somewhat downy stem, but near the base the pubescent character is absent. This species may be freely increased by division and also by seed, and may readily be established in moist Grass or similar spots in the garden. Native of mountains of Europe.

R. parnassifolius (Parnassia-leaved Crowfoot). — This is one of the most distinct of the dwarf alpine kinds, and is not to be confounded with any other. Inhabiting high elevations in the Alps and Pyrenees, it is generally found in granitic or calcareous soils in the fissures of rocks contiguous to perpetual snow. The thick, entire,

somewhat heart-shaped leaves are very distinct. The flowers are snowy white, about the size of those of R. amplexicaulis, and are produced several on stems about 6 inches high. This species may be grown quite successfully in moist, loamy soil in the rock garden in much the same way as recommended for R. anemonoides.

R. pyrenæus (Pyrenean Crowfoot).—A distinct species, attaining to nearly a foot in height and inhabiting the highest of the European Alps, more particularly the Pyrenees, where it abounds near the limits of perpetual snow. The leaves are either lance-shaped or linear, with the scapes downy at the top. R. plantagineus from the Piedmontese Alps, and R. bupleurifolius, usually found in moist valleys in the Pyrenees always at a much lower altitude, are varieties of this species. All have white flowers, which appear in May and continue to July, and are of very easy culture, though perhaps second-rate in value.

R. pedatus (Pedate Crowfoot).—A yellow-flowered species about 1 foot high, and rather abundantly distributed in parts of Hungary, Tartary, and about the river Volga, in Siberia. The leaves are smooth, the radical ones stalked; flower-stem erect, with from three to five flowers.

R. rutæfolius (Rue-leaved Crowfoot).—Another species from the higher Alps. In common with the other species from these high elevations, this one is only some 4 inches or 6 inches high. The leaves are pinnately lobed and the stem usually one-flowered. In the plants I have seen the blooms are white, but I notice the flowers are described as yellow in the "Dictionary of Gardening." In "Alpine Flowers" they are also described as "pretty white flowers with orange centres," and this entirely agrees with the plants I have grown from time to time. The plant is easily grown in moist gritty loam either in pots or in the rock garden. In the latter it should be given a position and soil similar to R. anemonoides, taking care to keep the plants fairly moist through the growing season.

R. scutatus (Shield-leaved Crowfoot).—A distinct species with large yellow flowers and large, very smooth, kidney-shaped, crenate leaves. A distinctive feature of this plant is that it is without radical leaves, and in this particular differs from those most nearly allied, such as hybridus, brevifolius, Thora, &c. The stem leaves are sessile with the lower ones clasping the stem. It is a native of the mountain woods of Hungary and grows nearly 1 foot high.

R. Seguieri (Seguier's Crowfoot).—This species grows about 6 inches high, with three-parted leaves, and is more nearly allied to glacialis and alpestris, though widely distinct from either. Usually the flowers are solitary and rarely as many as two or three on each stem, which is erect. The flowers are pure white, with distinctly rounded petals. Native of the Alps of Provence, Piedmont, and Carniola in rocky fissures.

R. Thora (Venom Crowfoot).—The roots of this species are said to be exceedingly acrid and poisonous, and formerly used by the Swiss hunters of wild beasts to poison their darts. It is a yellow-flowered species closely related to R. scutatus, but differing from it in always producing long-stalked and very smooth radical leaves. Both these kinds require room to develop their roots, and are of easy culture in moist loamy soil with plenty of grit added. These two as well as those cited under R. scutatus are more vigorous in their growth than many of the species from the higher Alps, and for this reason a goodly depth of soil should be given them. R. Thora is distributed through Switzerland, Austria, Greece, the Carpathian and other mountains on rocks and in pastures always near the snow-line.

The above will be found among the best of the alpine species for growing in the rock garden or in positions suggested. In those gardens where the choicer kinds are already established, endeavour should be made to raise seedlings, and in this way to form a little colony or group where they may be seen to better advantage. Unfortunately for the cultivator in England, or indeed generally in the lowlands, many species are only obtainable when in flower, and digging them up in this condition sadly mars the chances of establishing the rarer species. But once established they present very little difficulty, and many kinds are most charming when in flower. The seeds should be sown thinly as soon as ripe in sandy soil in boxes or pots and not be disturbed for a full year, or they may be sown beneath a thin flat stone on the rockery, but near to the sides so that the seedlings may push forth. Where opportunity offers this method is better than in pots, as the seedlings can grow unchecked, as in their native haunts. Some of the species seed very freely, and others, as amplexicaulis, are readily obtained from the dealers in hardy plants.

Border Species and Varieties.

Ranunculus aconitifolius fl.-pl. (Fair Maids of France).—Without doubt the most charming of the border kinds, growing about 2 feet high when fully developed. But to attain perfection with this plant, it should be put out in deep loamy soil in a moist position and not disturbed for several years. The plant possesses a charmingly neat, attractive habit of growth and the spray-like manner in which the flowers are produced on the stems fits it for use in a cut state in a way such as few plants possess. The plant is very freely covered with its double, pure white, neat, compact blossoms, which are always admired when seen in good condition. Under cultivation the plant always grows best in somewhat holding soils, and if moist so much the better. It is especially suited for autumn planting.

R. acris fl.-pl. (Bachelors' Buttons).—This is the double yellow kind frequently seen in cottage gardens. When seen in a large group its rich yellow double flowers are very pleasing. It is about 2 feet high and erect in habit, and though pleasing in the tone of yellow seen in its flowers, lacks the grace and beauty that characterise the last-named kind, and which render it indispensable as a border plant.

R. speciosus.—This is a first-class perennial border kind, though the plant is only rarely seen. The individual blossoms are as large as those of the double Marsh Marigold, and equally effective in the exceeding richness of their golden orange blossoms. The plant delights in a damp, shady spot in rather heavy soil and will here produce large double flowers, that one might be pardoned at first sight for calling it a Marsh Marigold. The habit of growth, however, is quite distinct in the two plants. R. speciosus is of semi-procumbent habit, and rarely attains to more than 1 foot in height. It may be increased by division of the roots.

Garden or Florists' Varieties.

Ranunculus asiaticus.—This is the species which has given rise to the several sections of garden Ranunculi, which were much esteemed by the old florists. They are indeed among the most beautiful of garden flowers to-day, requiring but the observance of a few simple rules to grow them well. One thing should always be borne in mind if we are to succeed with this charming and varied group of garden flowers, viz., that they must be lifted each year and kept in a place secure from frosts if we are to retain them in health and vigour. It is only in the more favoured localities and where the soil is light and warm that these Ranunculi can be left all the winter in the soil and with safety; and where this can be done, the roots, or "claws," as they are also called, are much best when lifted in July and given a thorough drying before replanting in October or November. In all cases this enforced rest is highly beneficial. Where the roots are planted early in the year, say any time during February, the soil should have been prepared in the previous autumn. A perfectly drained as well as light and warm soil is of chief importance; the soil must also be deeply worked and well enriched with short rotten manure. On very sandy soils, cow manure that has been laid aside for at least six months will be best, on account of its cooling, moisture-holding nature in the soil. Trench the soil fully 2 feet deep and work in the manure at the top of the lower spit. Throw the soil up quite roughly, so that frost and air may break it down. In February, if the weather is open, level the ground with a fork and tread it as little as possible, and, if procurable, some very short manure or old potting soil may be scattered over the surface first, or sown in the drills with the roots. Where quantities are grown it is best to plant in shallow drills not more than 2 inches deep, pressing the roots into position with finger and thumb; then cover in and make the surface moderately firm. There is considerable variety in all the sections, but the French kinds are the strongest growers and are wonderfully free-flowering. The Persian kinds have somewhat smaller flowers and are also dwarfer, but still contain many very fine varieties. The Turban Ranunculi are also a varied group and contain some very richly coloured forms. Indeed, the whole of them are well worthy of fuller representation in our gardens, and furnish a rich variety of flowers in the summer. They are especially suited to beds on the lawn and for small gardens, as they occupy but little room. When we consider the ease with which these things are grown and the wonderfully rich and telling effects that may be produced by a few beds of them, it is surprising they are not more grown. In large gardens where beds of separate colours could be arranged they would produce a surprising result in shades of rich vermilion, crimson, pure white, yellow, pink, and, being so remarkably cheap, would prove quite inexpensive in the end. Like many other members of this genus, these varying hybrid strains delight in moisture in the growing season; indeed, this is essential if the flowers are expected in all their brightness. This and a partially shaded position are the greatest aids to ultimate success in the cultivation of these much-neglected, though very beautiful and easily grown, plants.

E. J.

The Week's Work.

KITCHEN GARDEN.

Earliest hot-bed.—The time is at hand when the first bed of fermenting material should be made up. This will allow of any excess in heating to subside and due settlement by the end of the first week in January. Those who may have to produce new Potatoes, Horn Carrots, and Radishes in April take care to collect leaves in bulk early in the autumn, and if stable litter has to be used, to mix and sweat them previous to using. Beds that are made up hurriedly with fresh littery material invariably cause no end of trouble, as, although owing to a sudden lowering of temperature out of doors the bottom heat declines to what is considered a safe figure, they as suddenly rise on a return of mild weather, and, in spite of airing by night as well as day, growth appears far too soon and is weak and spindly. It is astonishing how gentle a heat is required to start the tubers and to maintain growth in a healthy condition, and any slight deficiency in the bottom heat can easily be made up should sharp frosts intervene by building up linings to the top of the frames. Still it is of course advisable to have the beds a foot higher all over than is necessary for successional ones for February planting. The great point in building hot-beds is to put on moderate layers of leaves before treading, otherwise they will be spongy, and when the soil is thrown in, the frames will sway on one side, which to say the least looks very unworkmanlike. Let the linings be well trodden and beaten with the back of a five-tined fork at frequent intervals, or they soon collapse when weight is put upon them. If in a few days the heat of the beds is not excessive, the soil may be thrown in and when warmed through the tubers planted. A somewhat light loamy compost ren-

dered porous by the free addition of spent Mushroom manure, and if not in very good heart enriched by a sprinkling of some approved fertiliser, will form a safe and lasting medium. Farmyard manure in any form I do not approve of in the culture of Potatoes in frames and pits, as at this sunless period of the year a firm and consolidated stem growth cannot be secured if such stimulants are used. It is easy to supply the roots with liquid manure when the tubers have formed later on. A depth of about 9 inches of soil is what I allow, this being increased somewhat when the slight earthing up is given. The less earthing is practised with early Potatoes either under glass or on south borders the better, as it can only have one effect, that of excluding sun and air at a time when those important agents are scarce. Planting completed, admit air in small quantities daily when warm, as there is sure to be a certain amount of steam generated and which is best liberated, otherwise it condenses on the sash-bars and then drips into the soil, which is an evil. A few words must be said about varieties. I have tried many sorts, but find none better than Ringleader and Puritan for frames. The latter is somewhat taller in growth, but if the haulm is pinched when a foot high and a few pegs used for keeping the growths away from the glass, all will be well. To follow Ringleader, Sutton's Seedling does well in frames, but the same pinching and pegging must be adopted, or the frames must be raised from time to time by means of bricks placed under the corners. It will pay anyone having spare ground immediately beneath a south wall to prepare it now for the reception of a few early Potatoes in February, as it is easy to protect growth from all ordinary frosts by covering nightly with bags or canvas. I do not advise sprouting the seed much for this early outdoor planting, as sometimes it gets a check. If the sprouts are just formed, that is all that is required.

CARROTS.—In a one or two-light box elevated on the warm bed just referred to, sow now seed of an early Carrot for drawing in April. At that time the roots may be thinned and used for soups, and the rest allowed to swell for future use. Some still cling to the old French Forcing, and while admitting that it may be ready for drawing a few days before other sorts, there are so many finer strains of early Carrots, that I have for several years given this small old sort up. The one I rely on is Webb's Market Favourite, a stump-rooted form of exquisite shape, having a very small core and of delicious flavour. Sown at the same time as the well-known Nantes, it is ready for use from ten days to a fortnight earlier. Nantes Horn, however, must not be ignored, as it is a brilliantly coloured, finely-flavoured Carrot, and may even do better with some than other sorts. In regard to the distance between the rows, if no other seed, such as Cauliflower, Cabbage, or Lettuce, is to be sown in the same frame 9 inches will suffice, otherwise a foot must be given, or these quick-growing subjects will smother the Carrots in infancy. The one great evil in associating Carrots and Cauliflowers is that the latter want almost full exposure to the air when as yet the former are in too young and weak a state to stand it, and if once young Carrots become stunted through a check they never again do well. I sometimes give Carrots 12 inches between the rows, and sow Wood's Frame and French Breakfast Radishes broadcast; the joint crops then do very well; but where Radishes are sown between rows of Potatoes in frames, unless a very short-topped variety is planted and extra space allowed, the Radishes in nine cases out of ten are a failure, the Potatoes outgrowing and smothering them.

GLOBE ARTICHOKES.—Where my advice was taken, the old stools were well surrounded with long loose litter or, better still, well seasoned Bracken during the early part of November. Owing to the prevalence of wet weather since that date the mulching has become saturated and partly decomposed, rendering a re-mulch necessary. This will preserve the offsets until the return of better weather and prevent death should severe frost occur. Those offsets which in case of any contingency were severed from the parent plants and potted up in autumn must be examined occasionally, as damp or drip is apt to injuriously affect the centres. Remove any green crust which may have accumulated over the surface of the pots, and sprinkle freely with lime and wood ashes to dispel damp and sweeten the atmosphere. By no means leave the lights off, but air freely and continuously. J. CRAWFORD.

FRUIT HOUSES.

EARLY PEACH HOUSE.—If this house was started a weeks ago the buds will now be moving, and fire-heat may be given to raise the temperature 5° to 10° all round. A low night temperature will be conducive to the best results, and the weather must be taken into account. On cold nights 45° to 50° is sufficiently high, and during the day 10° higher, with a few degrees more during sunshine. In large houses or with trees badly ripened, it is an excellent plan to place a bed of warm leaves and manure on the surface to encourage the sap to rise freely. At times it is necessary to force trees that have not been hard forced previously. To such, a little warmth at the start is of great assistance. Trees that have been forced for years force so readily that the above advice is not needed, and more moisture may be given in the way of syringing overhead from the start, as the trees dry more quickly without any fermenting material over the roots. In syringing, avoid too much steaming of hot-water pipes, if these are directly under the trees, as the buds will drop if too hard forced. From the time the house was closed till the beginning of the year very little ventilation will have been necessary, as the little warmth obtained from the sun would promote bud-breaking and do no harm, though the temperature was higher than is advised above. But with increased sun-heat as the days lengthen these remarks do not hold good, as it will be necessary to admit a little fresh air daily to sweeten the atmosphere and dry the trees. This will also strengthen the buds and prevent them dropping. Bud-dropping often occurs at this period of forcing, more especially with the earliest trees. The early American varieties are much subject to it. In their case I have found a brilliant summer, with a good ripening season and ample supplies of moisture at the roots, the best preventive. Previous to the flower-buds opening, a thorough fumigating should be given several nights in succession, as, though the trees may appear free of green or black fly, these increase so rapidly during the flowering that it is well to take precautions to prevent their doing so, as only a few will hinder a free set. As regards moisture, much depends upon the weather, and even when the trees are in bloom it is well in fine weather to damp the stems and old wood with other parts of the house.

FLOWER-BUDS AND SETTING.—In advising the removal of buds before they expand, I am aware I am treading on dangerous ground. Many object to it, but I fail to see why the Peach and Nectarine in common with other trees should be allowed to set all the blooms, as it greatly weakens the trees. A judicious thinning assists those required to set to have more room and is conducive to the health of the trees. We do not hesitate to take away bunches of Grapes before they flower, and the Peach bears such an enormous quantity of bloom when in a robust condition, that there is no fear of evil consequences if moderate thinning is resorted to, removing thickly placed flower-buds and doing the work in a careful manner. In the case of kinds which drop badly, as Early Alexander, it may not be wise to thin, as often the fruits of these kinds set on the back buds or those on the small spray, the larger buds or those on strong wood failing to set freely. With regard to setting the fruits, the chief care is to avoid fluctuations of temperature, and with early trees it is necessary to fertilise the bloom to distribute the pollen, doing the work in the early part of the day. I find the best distributor is a rabbit's tail, as it can be used more lightly than a camel's-hair brush. Many good cultivators advise a dry, airy temperature during the setting period. I do not, as long as the trees are dry at the time named. By freely damping the floors, walls, and boles of the trees a much better growth is secured with freedom from red spider and green-fly. Of course, I do not advise overhead syringing when in bloom, but I think injury is often caused and bud-dropping brought on by excessive dryness. Thoroughly watering the borders at the start should tide them over the flowering period, but in case water is necessary or the roots close to the hot-water pipes, it is well to water before the bloom expands, giving tepid water in liberal quantities.

SUCCESSION HOUSES.—Pruning, cleansing and preparing for the succession crop will now be the principal work in this department. As regards pruning, there should be no delay. I always endeavour to get all my Peach and Nectarine trees in condition for starting by the end of the year. No matter whether midseason or later kinds, there is a great gain in doing the work early, as insects may then be got rid of more readily, the trees get a longer rest, and one may use stronger measures to get rid of scale before the buds swell. When scale is present apply Gishurst compound freely, using the insecticide stronger for the old wood at the rate of half a pound of Gishurst to a gallon of tepid water, and half the quantity of Gishurst for the new wood, using rain water with a very soft brush. Previous to the cleansing it is well to loosen all ties from the trellis and tie the wood in bundles after the pruning to facilitate cleansing all parts of the house. In pruning do not hesitate to remove gross wood; also giving ample space for next year's growth to develop. In the case of large trees that have filled their allotted space it is necessary to shorten the terminals and thus allow new wood to spring from the base. As the season advances it may be necessary to thin to the best shoots. In replacing the shoots on the trellis after the cleansing, care must be taken not to tie too tightly. Though the ties may look neat now, room must be given for the wood to swell as the growth increases, and when in full leafage the shoots are overlooked and gumming follows. In cleansing do not omit to thoroughly wash all parts of the trellis and give new ties to all parts of the trees.

LATE PEACHES.—I place great importance upon the late Peaches. My remarks apply with equal force to those parts of the country where Peaches and Nectarines do not thrive on open walls. Much the same routine is necessary as advised for succession houses. Now is a good time to renew any worn-out trees or to add new varieties, and much better results are secured when the new trees can be obtained of a good size. If home grown trees which have been on walls are planted, it is well to lift carefully and thus save the crop, as if the roots are preserved and there is no delay in removal, the trees will carry a fair crop the next season. There is no better time than the present to secure new material for future planting, as the weather is now open and the season as regards planting all one may desire. The strongest trees are not always the best, those with well-ripened wood with an absence of coarseness being preferable. I prefer what are termed one-year-old trained trees. These may be had good and soon take to the different soil, and may be given plenty of room during the growing season. After the trees are prepared for the next season's cropping, air freely and do not allow the trees to suffer from a warm temperature.

TREES IN POTS.—Much depends upon the time these trees are required to fruit. With pot trees of any kind it is well to bear in mind that the best results are obtained from trees given plenty of time. The trees may now be removed indoors, the house having been thoroughly prepared previously by cleansing. If repotting was neglected at the fall of the leaf in the case of large trees, there should be no delay in doing the work. Severe measures in the way of restriction of strong roots must not now be taken if it is intended to force the trees. When trees are brought in-

doors it is well to examine the soil, and if dry, to give a good watering. Trees in unheated houses may be prepared by cleansing, pruning, repotting, or top-dressing, as required. As the cool house is frequently used for Chrysanthemums, it is well to limewash the walls and cleanse paint, to remove all traces of any green-fly the former occupants may have been infested with. Heated houses may be closed on January 1, and the trees will not require much water at the start. Once in ten days will usually suffice, till the buds are breaking freely, with plenty of air during bright sunshine, and a gentle dewing overhead with the syringe twice daily. In severe weather a little warmth in the hot-water pipes will be required, but the night temperature should not exceed 45°, with 10° higher by day during the first month.

Melons.—Those who have every convenience for growing these fruits will now require to make a start to obtain ripe fruit early in May. Early in December I advised the sowing of an early thin-skinned variety for first crop. Such plants should now be making fair progress and be strong enough to plant in a couple of weeks, so that it will be necessary to prepare the house for the plants. For early fruits, pot culture is excellent if there is no check given during the swelling off, as I find pot plants mature the fruit much sooner than those in beds. If grown in 16-inch or 18 inch pots, these should be plunged on a firm base, and, if not over hot-water pipes, will need fermenting material, such as manure and leaves. Melons delight in a high moist temperature from the start, and where the plants are too weak I advise sowing again in 8-inch pots in a brisk heat. These plants will be superior to those named above. In preparing soil for pots or beds, allow a fair proportion of strong loam, some decayed manure and bone meal with old mortar rubble being mixed with the loam. It is now a good plan to sow every three weeks, as by this means a good supply of plants will be always at hand.

G. Wythes.

Orchids.

CATTLEYA CRISPA.

The number of really good Orchids flowering during August and September, a time when they are useful for exhibiting, is not large and it is a pity this fine old species is not more generally grown. There is no difficulty in its culture, and although the blossoms lack the width of petal desirable in Cattleyas, its free-flowering habit and the number of flowers produced on the spike amply make up for this trifling deficiency. The flowers on various plants of the species differ widely from each other in colour, but each and every one may be styled a fine Orchid. It is a vigorous, free-growing plant, the pseudo-bulbs 8 inches or 9 inches high, each bearing a leaf upwards of a foot in length. On strong plants the spikes carry from five to eight large flowers, the sepals and petals of which are white, the latter beautifully undulated on the edges. The lip is three-lobed, the centre one a good deal elongated, wavy on the edge, the point recurved, the front portion of which is a very bright purple with many radiating lines of a deeper hue. The side lobes are white externally, the inside where they enfold the column being lined with yellow and purple. As mentioned above, C. crispa is easily grown and flowered, but, like all in the genus, it requires care to obtain the best results. To get good growth the roots must be well looked after and kept in a healthy condition. The pots should be clean and filled to within a third of their depth with crocks, covering these with a layer of Moss to prevent the water swilling the finer portions of the compost down among them. The peat should be in rather rough lumps, and only the best quality with plenty of fibre must be used in about equal proportions with clean fresh Sphagnum Moss. Charcoal and rough pieces of crocks about the size of a Hazel Nut may be mixed with this and bedded firmly about the roots in potting.

The early spring is the safest time to repot, and if the roots in the old compost seem fairly healthy it is unwise to disturb them much, relaying them in the new pots and filling up around with the compost. But if, as is too often the case, they have been growing in a heavy, close mass of decayed peat, most of them will be found to have perished or to be far gone. The only thing to be done here is to wash every part of the old soil away with tepid water, cut off all the dead roots and place the plants in as small pots as they can be conveniently got into, watering very carefully and allowing them a little extra heat until new roots are produced. The same may be said of newly-imported plants, but healthy, well-established specimens thrive in the usual Cattleya house temperature. C. crispa is recorded as having flowered in this country nearly 70 years ago, and was sent to Chiswick from Rio by Sir Henry Chamberlain. Among the varieties that have been described and figured in various publications are

C. crispa Buchananiana, a fine form named in compliment to Mr. J. Buchanan, of Edinburgh. This is larger in all its parts than the type and has a broader, flatter lip.

C. crispa delicatissima bears smaller flowers than the type, and has the segments pure white. The centre lobe of the lip has a suffusion of rose and the veinings as in the typical form, but these are very faint.

C. crispa superba is, as the varietal name implies, a large-flowering and richly coloured form of the type, the blossoms each measuring nearly 8 inches across. This varies in colour a good deal, but I am not aware of any sub-varieties having been specially named. The most attractive forms are those suffused with a soft rosy-purple.

There are a few other varieties, but the above are the most distinct. They are all natives of Southern Brazil, and the flowers last about a fortnight or a little over in good condition if not wetted or kept in too much heat.

Odontoglossum pulchellum.—Although not so showy as many other kinds, this elegant species is always welcome, the pure white flowers, with just enough yellow on the lip to show up the rest of the flower, being deliciously scented and lasting a long time in good condition. It is of the easiest culture, thriving well in the cool house with other Odontoglossums, and never getting out of health if reasonable attention is given it. It is a restless kind, not unfrequently starting to grow again before the flowers are past, and therefore needing to be well watered at the root all the year round. It soon makes nice, well-furnished plants, and is one of the easiest of all to establish. Pot culture in peat and Moss suits it best. It is a native of Guatemala, introduced in 1840, the variety majus being larger in all its parts than the type.



Cattleya crispa. From a photograph sent by Mrs. Fraser, Westfield House, Ipswich.

Odontoglossum crispum virginale.—This chaste and beautiful variety, without a spot of any colour upon the pure white sepals and petals, frequently appears among imported plants. The forms vary a good deal in size and in the width of the segments, but they are all beautiful and as easily grown as the typical kind. It was first exhibited by Messrs. B. S. Williams and Son, of Holloway, in 1882, when it received a first-class certificate from the Royal Horticultural Society.

Scuticaria Steeli *(W. G. G.).*—This does better in baskets than pots, but best of all upon large blocks of cork or pieces of Tree Fern stems. If you decide to grow your plants in this way, be sure that the blocks are large enough to allow of the free extension of the roots, and that the latter do not suffer from want of water at any time, more especially when in full growth. A little Moss ought to be placed under the plant, which should be firmly wired in position. If you use baskets for the plants, you must form a high cushion of compost for the bases to rest on,

otherwise the points of the young leaves will still enter the compost as you describe, it being natural to this kind to grow with the points of the leaves downward.—R.

Cypripedium names.—"Stelis" (p. 463) appears to have fallen into a most unaccountable blunder in his well-meaning remarks respecting Cypripedium names. Ceres, Fascinator and Medea are rightly enough the result of crosses between C. Spicerianum and hirsutissimum, but Marchioness of Salisbury and Charles Richman are the result of crossing bellatulum and a barbatum variety. Undoubtedly new names are being constantly given quite unnecessarily.—REGINALD YOUNG, *Liverpool.*

—— I notice there is a slight mistake in the note I sent you a short time ago, and which you published in your last issue. C. Ceres, C. Fascinator and C. Medea resulted from crossing C. Spicerianum and C. hirsutissimum, and C. Marchioness of Salisbury is a cross between C. bellatulum and C. barbatum superbum. However distinct, C. Marchioness of Salisbury cannot be more than a form of C. Charles Richman, which had been previously certificated.—STELIS.

SOPHRONITIS.

ANYTHING bright and telling in colour as these charming little Orchids are is doubly acceptable during the short, dull days of winter when everything outside bears a cheerless look. All the species are of small growth, but they are also extremely free-flowering when well established. The species upon which the genus was founded in 1826 by Dr. Lindley is S. cernua, and, besides this, there are only two distinct species. Their culture is not difficult provided a suitable temperature is maintained and an atmosphere free from fluctuations. They thrive in a cool house, such as is usual for Odontoglossums, but, according to my experience, are better both as regards size and number of flowers in a few degrees more heat and also rather more sunlight than is here afforded. For newly-imported plants this is really necessary, for they will not start nearly so freely in a house where the night temperature ranges below 55°. When received, they require care in handling, so as to keep the little tufts of pseudo-bulbs from falling apart, as they will do if roughly used. A good cleaning is the first thing needful, well sponging every leaf and pseudo-bulb with tepid soapy water; afterwards cut away all decayed parts, being careful not to cut through the rhizome, but simply to take the pseudo-bulbs off with a keen knife, and any that are doubtful looking leave on, as they are easily removed afterwards if decayed, while if sound they may break and serve to make a better furnished plant. Lay them out thinly upon a stage in a warm house and spray them daily in dull weather, twice or three times when bright. The tiny pseudo-bulbs soon fill out, and commence either to emit roots or to grow, and must be placed in whatever receptacles they are to be grown in. They will grow in pots on the stage in the usual way, but will be found to flower more freely if hung up near the light in the small pans now so much used for Orchids. They need only be large enough to take the plants easily. Allow of about an inch margin of compost, which for the first season must only be a very thin layer, or even a slight surfacing of Sphagnum over the crocks, which ought in all cases to nearly fill the pans. After one season's growth this may be added to without removing the plants from the pans, and may be the usual mixture of peat and Sphagnum, both of good quality. This must be firmly bedded around them with the dibber, and if trimmed off neatly it is much easier to determine when the plants are dry than if ragged ends of peat or Moss are allowed to stick out. The plants must be kept fairly moist at the roots the whole year through, and no great variation of temperature is needed summer or winter. The only other care required is to keep them free of insects and to see that the pseudo-bulbs are kept steady in their places. If rocking about they will fail to root into the compost, and consequently the growths will be weak. The plants often push a few flowers upon the first-made growths, but always bloom more profusely when well established. If preferred, Sophronitis may be grown on blocks of wood, rough pieces of Apple or Birch being as suitable as any, and in this way they have a very natural appearance. A little Moss for the roots to run through is all that is needful, and they must of course be firmly wired on, the blocks being large enough to admit of their extension, as mentioned above.

SOPHRONITIS CERNUA is the typical species. It is a very small-growing Orchid, with clustered pseudo-bulbs half an inch in height, each bearing a single broad green leaf only 1 inch or so in length. The blossoms are produced in November or December, about six being the usual number on each spike. The sepals and petals are scarlet, with a yellow lip. It was introduced from Rio de Janeiro in 1826, and the flowers last a long time in full beauty if not wetted or kept in too much heat.

S. GRANDIFLORA is much the best in the genus, the rich glowing tints of the flowers being probably unexcelled in the whole Orchid family. The flowers are upwards of 3 inches across, the sepals and petals being bright scarlet in the type, with yellow markings on the lip. The flowers of this kind are produced singly, and not in racemes, as in the last-named. There is a variety of this with rich carmine flowers. It is a native of the Organ Mountains, and was introduced in 1837.

S. VIOLACEA comes from the same habitat, and was introduced three years later. It is seldom seen in good condition, or, in fact, at all in collections, yet it is a most desirable and lovely little species. The pseudo-bulbs are only about 1 inch in length, fusiform and fluted, and each bears a single leaf. The flowers, which occur singly, are of a pretty shade of rosy purple. It is the weakest growing of all and not so tufted in habit, being on this account more suitable than the others for cultivation on blocks. H. R.

MORMODES LUXATUM.

WHERE many plants of this singular species are grown a good deal of variation will be found in the flowers, and all are worth growing on account of their peculiar structure. It is one of the best of its genus, which is nearly related botanically to Catasetum and Monocanthus. The typical flowers are of various shades of yellow, with a band of brown on the lip. There is also a white variety, eburneum. M. luxatum punctatum has small spots of red on the sepals and petals. M. luxatum thrives best in a warm moist house, and the plants ought to be only sufficiently shaded to prevent injury to the leaves by scalding. They begin to grow early in the new year, and when the shoots are just on the move is the best time to repot. Being a vigorous rooting kind a good deal more substantial compost may be used than for some of the Catasetums, and I have seen very good results by using a third of nice fibrous loam in conjunction with the peat and Moss. This must only be for strong, well-established plants, smaller ones being planted in peat and Sphagnum only, with sufficient crocks or charcoal to keep the mass open. The pots must be of medium size and should always allow of a good margin of compost, which must be finished just beneath the base of the leading pseudo-bulbs and arranged in a convex mound. This repotting will only be necessary about once in three or four years if a little fresh surface compost is added annually. After repotting, the plants must be returned to the warm house and a damp atmosphere kept up about them by syringing between the pots. Overhead watering is dangerous, as the water is apt to lodge in the centre of the new growths, causing speedy decay. As the young pseudo-bulbs begin to form the roots will be very active, and plenty of water must then be given, as often as twice a day being sometimes necessary. They are not constant in their habit of flowering, sometimes pushing up spikes as soon as the growths are complete, at others resting awhile beforehand. But when the growths are complete, whether flowers are showing or not, the water supply must be curtailed, and later on when entirely at rest only enough must be given to keep the pseudo-bulbs plump. At this time the most suitable position is on a shelf near the glass in any structure where the night temperature is kept at about 55°. The leaves are subject to the attacks of scale, and after these have fallen the insects secrete themselves under the scales upon the pseudo-bulbs. Care must be taken to keep these in check, as upon the health of the foliage depends in a great measure that of the entire plant. M. luxatum is a native of Mexico, and was introduced in 1842.

Lælia superbiens (St. Joseph's Wand).—This fine species is now in bloom, one spike having seventeen flowers. The long, bare stem tells rather against it, as it is only in large houses that its beauty can be seen, but where there is room for its full development it is very beautiful. Each flower spans about 6 inches; the sepals and petals are rich bright rose, the latter prettily undulated. The lip is similar in ground colour, with stripes of deep crimson, and a yellow centre. L. superbiens thrives well on the central stage of the Cattleya house, and must have plenty of room. The pots must be fairly large, and as it is nearly always growing and a vigorous-rooting kind it requires plenty of water. It is one of Mr. G. Ure-Skinner's introductions from Guatemala. He found it growing on rocks and in similar positions in 1840.

Lycaste Skinneri rosea.—Among a number of varieties of this well-known and useful species this takes a high position. The flowers are fully as large as in the type, and of a very rich tint of rose on the sepals and petals. The lip is very pale rose, with a profusion of crimson dots. It is a native of Guatemala, and, like the type, is of the easiest culture, thriving well in a cool house if kept free of insects and allowed plenty of water at the roots while growing. A sub-variety, rosea superba, has even larger flowers, each measuring upwards of 6 inches across.

KITCHEN GARDEN.

EATABLE CUCUMBERS.

THERE seems to be a prejudice against Cucumbers not easy of removal. It is true immense quantities are eaten, but the very people who like them the most are frequently among the first to condemn them as being unwholesome or indigestible. It is possible to have Cucumbers really fit to eat and most enjoyable, and equally possible to have them unfit for human food. We are far too fond of big things. When Cucumber plants are doing well, and especially during such a favourable season for frame culture as that just passed, growers are so proud of their crops, that they delay cutting as long as possible, and the consequence is, only overgrown, comparatively tough and really indigestible fruit ever reaches the tables of the owners of the gardens and their friends. Very many frame-grown Cucumbers are also sold in small towns and villages, and seeing that the larger they are the more readily they sell, it is not very surprising that they are left on the

plants longer than is good for them. In some few gardens Cucumbers are really well grown, and are sent to the table in excellent condition, but more often than not they are either bitter or otherwise second-rate. Those great, limp, fat fruits which sometimes take prizes at shows are not nearly so digestible as smaller, quickly-grown fruit cut when yet as brittle as a stick of sealing-wax. Market growers cannot afford to either waste time in the growth of Cucumbers or to leave them hanging on the plants for show, as that takes too much out of the latter; consequently, what they send to the markets are, if eaten within three or four days of cutting, perfectly eatable and wholesome.

As a rule, market gardeners aim to grow everything that is attractive, the question of quality not greatly influencing them in their choice of varieties, but as far as Cucumbers are concerned the variety that best pleases the retailers also happens to be very superior in point of quality. In Rochford's Market Favourite we have what ought to be considered a model variety, yet very few private gardeners think of sowing it. It is neither a long nor a showy Cucumber, but the plant possesses a good constitution, is very productive, and the fruits are straight, moderately thick, furnished with spines, of a good colour, and particularly good to eat. It also possesses the great merit of keeping fairly fresh several days longer than any other variety that I am acquainted with. I have never tried it in frames, but feel certain it would succeed as well in these as the more popular Telegraph, Lockie's Perfection, Tender and True, and such like. We are now being offered a new variety in the form of a cross between Rochford's and Telegraph, and it may be this will prove a decided gain, especially if the quality of the former is joined to the well-known good points in the Telegraph. The next best variety to Rochford's in point of quality is Cardiff Castle, but this, unfortunately, does not attain sufficient length to please the ordinary cultivator.

Undoubtedly the quality of any variety is largely affected by the cultural treatment given. The plants must be in good health, not merely as regards the haulm, but also at the roots, and the fruit be quickly grown, or otherwise the quality will suffer, let the variety be what it may. The haulm may be fresh and green and the plant apparently in the best of health, and yet the root action be faulty, the crops suffering accordingly. Gardeners too often try to keep their plants cropping longer than they should do; whereas the better plan would be to work them hard and root them out directly they give signs of being exhausted. This is what market growers do, and they might be imitated with advantage. Instead of planting a dozen or more plants at one time be content to start with a third of that number, and to sow more seed within a fortnight of planting, aiming to keep up a succession of young plants rather than to have larger batches at one time, with inevitable gluts of fruit, and later on thin or insufficient supplies of inferior Cucumbers. Young plants, however, may be quickly spoilt by faulty treatment at the roots. Too much manure and too much soil are the cause of innumerable early failures. If a sufficiently high temperature at the roots cannot be maintained by the aid of hot-water pipes, then the very earliest plants ought to have the benefit of a hotbed of well-prepared stable manure, or this and leaves in mixture, but after March there ought always to be enough heat in the house to obviate the use of bottom heat of any kind. When the roots strike down into a mass of decaying manure and leaves they are soon attacked by eelworms, and when thus badly galled are not long capable of supporting the plants, the latter eventually flagging, never again to recover. Always commence with quite small mounds of soil of a light loamy character, and keep the roots active near the surface by means of plentiful supplies of water and weekly light top-dressings of loam, decaying manure, or even leaf soil. Allowing the roots to descend freely into the old hotbed material saves much trouble in the shape of watering and liquid manure, but it is a great mistake all the same. Cucumber roots revel in a moist heat, and should not be smothered by either too much soil or by the sediment resulting from a free use of somewhat thick liquid manure. Nitrate of soda at the rate of about half an ounce to a gallon of water answers as well or better than anything I have ever tried, and plants in full bearing require plenty of it. Grand early crops of Cucumbers are sometimes had from plants in 11-inch or larger pots. The latter should not be unduly exposed to sunshine; frequent top-dressing to the extent of piling it up above the rims of rough fibrous loam and abundance of water and liquid manure should be given, and the plants be fruited similarly to Melons, that is to say, be trained straight up the roof of a forcing house and the laterals heavily cropped, stopping beyond the second fruiting joint.

High temperatures, accompanied by abundance of atmospheric moisture, are what Cucumbers should have, and if the houses containing the plants were less freely ventilated, there would be fewer complaints of the produce being uneatable or unwholesome. If the night temperatures range from 65° to 70°, and seldom fall below 75° in the daytime, an occasional rise to 90° not being objected to, the atmosphere never being allowed to become parched nor the soil about the roots dry, growth of crops will be rapid and quality good. Under this high pressure speed the plants naturally take up and evaporate much moisture, and will fail quickly if this is not supplied to them. Leaving the Cucumbers hanging on the plants an hour after they are fully grown is a waste of energy, and only those intended to be cooked before they are eaten should be allowed to thicken unduly.

W. Iggulden.

NOTES ON CELERY.

The past season having been a tolerably favourable one for the growth of Celery—at least, in this part of the country—perhaps a few notes on some varieties grown here may be interesting. As hitherto, Sutton's White Gem and their A 1 (red) were grown rather largely for the earliest supply, and both were satisfactory, for they were solid, crisp, blanched quickly and produced good hearts with little waste. White Pearl (Webb) is a varie-



Fair Maids of France (*Ranunculus aconitifolius fl.-pl.*). (*See p.* 502.)

gated kind, so much so, that really, for the sake of blanching, earthing up is unnecessary. It is after the style of White Plume—introduced some years ago with a great flourish—but a vast improvement on that variety in every way, being dwarf and stubby, with plenty of heart and few useless outside leaves. It appears to be a favourite with judges at early exhibitions (August), for at our local show it took first prize in good company and numerous entries, and third prize (for not extra well-grown stuff either) at one of the largest, if, indeed, not the largest, of the provincial shows. Perhaps novelty told in its favour in these cases. To follow these, I find none better than Sulham Prize, too well known to need describing. Pink Perfection is more of a novelty, of a beautiful colour, extremely crisp and excellent in flavour, but the variety seems as yet not to be well fixed, and, moreover, appears to be of more delicate constitution than most, being inclined to scald and damp under high culture.

Dobbie's Champion (Red and White) are large and coarse. For winter use, Standard-bearer and

Leicester Red hold their own against all comers. Where the rainfall is as heavy as is the case here, it is not easy to find the kind of Celery that will stand against it and keep well into the spring; but for the latest supply I rely almost entirely on Incomparable Crimson, finding it later in running than any variety I cultivate, and besides it possesses in a marked degree all the good qualities expected in Celery.

The above remarks apply to the supply of a private garden. For marketing I have no doubt the list of varieties would have to be considerably altered, larger, if coarser, kinds being probably more profitable. Besides, many of these enumerated are so exceptionally brittle as to require most careful handling, and this liability to be broken with rough usage would undoubtedly militate against them as reliable market varieties.

J. R.

A few good Tomatoes.—Of the many varieties of Tomatoes which have been tried here, as well as seen and tasted in other places visited, I have come to the conclusion that The Peach is far ahead of any of them as regards flavour and for use in a raw state; in fact I grow a larger number of this variety than all the others combined. I am aware it is but seldom grown in large quantities; many growers do not even know it, but why this should be in an age when so many Tomatoes are partaken of in a raw state is a mystery. It is also very distinct. It is small as Tomatoes go now-a-days, but under liberal treatment the fruits are borne freely. I would strongly recommend this variety for its excellence where a demand for superior flavoured Tomatoes has to be supplied. Of other comparatively small kinds Horsford's Prelude and Golden Nugget may be mentioned as good and useful for the same purpose. Of larger kinds for exhibition and cooking, there are many more to select from. In this class I have formed a high opinion of Canadian Express as a very early kind. I admit all the fruit borne by it are not of the perfect shape one admires, but it is an enormous cropper of fair quality. Precocity and heavy cropping should ensure it a share of attention. Challenger is better known, an excellent variety in every respect, producing heavy crops of perfect shaped fruit (deeper than Perfection). The quality is also very good. Duke of York is another kind of similar shape to the preceding, but of deeper colour, excellent in every way, and likely to become popular. Add to these a good strain of Perfection, and the selection, half-a-dozen red and one yellow, will be sufficient for all practical purposes in private gardens.—J. R.

Horse Radish.—It is very instructive to learn on the authority of Mr. Mason, of Greenwich, that the chief reason for our importing such large quantities of Horse Radish roots from Holland during the winter is that these Dutch roots are mild as compared with those of home production. It has been generally thought that the British people specially like that hot pungency which characterises slow-grown Horse Radish, but Mr. Mason's evidence is to the contrary, at least so far as town dwellers are concerned. The roots from Holland are so mild relatively, that quite a large quantity can be eaten without any unpleasant heat resulting. That is no doubt an advantage, as in such case the sliced or scraped root shavings can be so much more fully enjoyed. Roots grown under ordinary conditions and in rather dry soil are usually intensely hot, so that very little can be partaken of, and many who would otherwise eat them prefer to let them alone. It is evident that we can grow as mild roots as the Dutch if we only try. We must, however, have deeply trenched, retentive, and highly manured soil, nice clean straight young stems with crowns attached, and dibbled in fairly deep in rows 2 feet apart, or else have slightly raised beds each having three rows of roots 1½ feet apart, with broad alleys between so that there may be free access to water liberally during the summer. If there were sewage liquid at hand that could be utilised, so much the better. It is only by such high feeding and abundant watering, that these quickly grown mild Horse Radish roots are produced, and with our immense land and liquid sewage resources there is no difficulty in growing the roots abundantly at home.—A. D.

HORTICULTURAL EXHIBITIONS.

"R. H." (p. 350) writes on the above subject. He is, unfortunately, only too correct in his statement regarding disappointed exhibitors and judges. It has always seemed to me, and I have had some years' experience at horticultural shows, that those who impute dishonesty to the judges show thereby not only their malevolence, but their ignorance. I can safely say that I myself have never, either as committee-man or exhibitor, detected evidences of partiality in the decisions, and I believe judges to be, as a body, as upright a set of men as can be found in the United Kingdom. I am not holding a brief for them, and have no doubt that, if they considered it worth their while, they could fight their own battle ably enough. Neither do I uphold them because I have invariably received distinction at their hands. I have once been disqualified, by mistake I think, and have twice seen a, to my mind, inferior exhibit placed above my own. I do not, however, on that account, nor did I at the time charge the adjudicators with favouritism, but believe their judgment, though not coinciding with my own opinion, to have been carefully considered and unbiassed by partiality. On two occasions, moreover, I have carried off first prize when, according to my estimation, the second prize exhibit was superior to mine.

Many exhibitors seem to think that they cannot be disqualified, unless by *malice prepense*, and are so blinded by inordinate self-appreciation, that the preferment of a rival's stand to their own appears to them an evident proof of disintegrity. It sometimes happens that exhibitors, disappointed by disqualification or by the non-appreciation of their exhibits, bring such pressure to bear on a weak-kneed committee as to cause the latter to dispense with the services of deservedly-popular and fearless judges, and to fill their places with local men whose opinions are, so to speak, more flexible. This, in the interest of horticulture, is greatly to be deprecated. Judges are wanted who have the courage of their convictions and who will not hesitate to disqualify should they consider the regulations not complied with; not men who, fearing to give offence, pass over evident breaches of the rules without comment. Of these two classes of judges the latter would possibly be influenced by a knowledge of the ownership of exhibits, not arrived at by looking at the cards—a breach of etiquette that I have never seen indulged in by judges—but by, let us say, the colour of, or the shape of labels on, a stand of cut blooms. They recognise the stand as belonging to B, an exhibitor who has been winning first prizes in almost every competition for which he has entered. They are inclined to prefer C's stand, but the unvarying excellence of the renowned exhibitor dominates their minds, and the first prize goes to its usual destination. It may be urged that if the system of pointing the blooms had in this imaginary case been carried out the result would have been different, but this does not follow. The inexperienced judge may be led to place a higher value on individual blooms in B's stand simply because he knows that they are B's, and he cannot forget that B has the reputation of staging nothing that falls much short of perfection, and, in consequence, a bloom gets five where four would have been sufficient. To the efficient judges, knowledge of ownership makes no difference. They are not afraid of running counter to public opinion. They base their decisions on the merits of the stands as apparent to themselves, regardless of praise or blame; and this is as it should be.

As a rule, it is impossible for judges to ascertain the names of exhibitors, except by the connivance of the committee-man who accompanies them during their labours. The exhibitors' cards are usually in envelopes, which, when a decision is arrived at, are marked one, two, or three by the judges, the committee-man then opening the envelopes, and either affixing to them distinctive labels, or passing them to an attendant who carries them to an official who is filling out ornamental prize cards. In some cases the cards are merely laid on their faces, the judges marking the destination of the prizes on the reverse, but the envelope method is the better. Judges should certainly not be admitted into the show-room while the staging is in progress, not because their presence, enabling them to ascertain who are the respective owners of the exhibits, would lead them to a subsequent display of partiality, but because the inveterate grumblers would be sure to attribute anything that might be construed into a suspicion of favouritism to the knowledge gained by the judges by their inopportune entry. As a matter of fact, however, secretaries and committees of horticultural societies are mostly to blame when this happens. Judges are requested to be at the show-room at a certain hour. The same hour is probably advertised as the time at which the show-room will be cleared of exhibitors. But how often is punctuality in this respect observed? I was last year present at a large provincial show, where, at the time announced for the clearance of the room, some of the exhibits had not appeared. The judges arrived at the proper time and were kept waiting in the hall for an hour and a half before they were enabled to commence their duties, while, ere the latter were half completed, the public surged in. As "R. H." observes, it is quite possible to keep to time. Exhibitors soon recognise when secretaries and officials are not to be trifled with, and act accordingly. Exhibitors should be cleared out of the show-room at the time stated on the schedule. If they have not completed the arrangement of their exhibits, they must take the consequences of their unpunctuality.—S. W. F.

—— The season for horticultural exhibitions is fast drawing to a close. It may therefore be well to look back and see what has been gained from a practical point of view by them, and that we may understand more fully the subject before us, let the pecuniary side be left out of the question altogether. Horticultural societies have doubtless done much to foster and stimulate the cultivation of all kinds of garden produce, inasmuch as they have been the means of bringing together the finest specimens from the most successful cultivators in the kingdom. They have also done a great deal to hinder the natural development of some of our most useful plants and flowers. Some there are no doubt who will disagree with me, but those who are well versed in showing must confess that it is no easy task to carry off first honours at some of the leading exhibitions. We will take the Chrysanthemum. How many additional hours are spent to produce a single bloom fit for the exhibition stand; and if we could but know this we should then be the better able to understand the care needed to bring them to that state of perfection. It is not my intention to say anything to discourage the growth of these lovely useful autumn flowers, but rather to further their popularity. To show that employers as a rule have no idea of the time expended in preparing the blooms for the show table, it may be well to give an instance or two of their want of knowledge in this respect. A lady who was looking through the gardens here a few days ago, and who herself had a very large establishment, remarked to me when we were looking through the Chrysanthemums that she had been reading in one of the papers that the flowers on the show table were curled with tweezers, and asked me if such was the case, to which it was necessary for me to explain that flowers as shown were specially prepared for the occasion, and they had to be "dressed;" in fact most flowers were more or less treated in like manner from the Carnation to the Chrysanthemum. She was so shocked with the idea as to remonstrate with the societies for allowing such things to be done, express-

ing her disappointment that what she saw had not been grown naturally, as she had hitherto looked upon them as being natural productions, not works of art. This is no doubt the case with many employers. They see things on the show table, take a fancy to them, and are sadly disappointed because their gardeners are not able to bring them to the same state of perfection as those they saw at the show. Let us again turn our attention to the production of fruit. There certainly can be no artificial surface dressing of these, as such would spoil their appearance. The public, however, look with astonishment on the splendid samples staged, but they little understand the amount of labour and pains that have been spent to bring them to that state of perfection. When we see tanks built for heating manure water to a certain degree to be applied to the hardy fruit trees in the open quarters in order that the soil may in no wise be cooled by its application, it will then be understood why so few are able to compete successfully and how such splendid samples are grown. Again, turning to vegetables; from what we see in some of the monstrosities produced, it is evident to the practical gardener that a great amount of labour must have been expended on them, much more than could be afforded in the general run of places at the present time. Employers go to exhibitions and see these prodigious specimens, and if they happen to be new varieties, maybe will want their gardeners to grow some; but mark their disappointment when, instead of having specimens something like those shown, they only have one about a third in size and not all the same in character. Exhibitions have done much to encourage this sort of thing; but are gardeners benefited thereby? Many unpleasantnesses arise between gardeners and their employers owing to these facts, especially in establishments that are short-handed. Exhibitions, however, have another and, in my opinion, a far more pleasant side, and this is, they bring gardeners together from various parts of the country, and friends meet at these gatherings who would not in all probability see each other for years if such were not the case. It is certainly pleasant to meet old faces, and though we cannot all be competitors, those of us who are out of the running can congratulate our friends on their success or console them in their rebuffs. —H. C. P., *Buxted Park.*

NOTES OF THE WEEK.

Mimulus Queen's Prize.—Nothing in the Mimulus line that I am acquainted with approaches this excellent strain, for the plants are remarkably dwarf and extremely free-flowering; in fact the seedlings commence blooming almost as soon as they are through the soil and keep on flowering. The flowers are very beautiful, being varied in colour and distinctly spotted, reminding one more of spotted Gloxinias than anything else. For a damp spot I know nothing to compare with them. All who saw them here last summer were astonished and delighted.—J. R.

Jasminum nudiflorum.—Among the few hardy shrubs that do something to enliven the dull days which see out the dying year, there is none which claims our gratitude more justly than this Jasmine. It is one of the many introductions made by Fortune for the Horticultural Society, which have become as common and as well known as many of our native plants. When it was first introduced from the north of China it was considered only suitable for indoor culture, but now, in the middle of December, it brightens up many a street in the suburbs which would otherwise be dreary stretches of brick wall. Although it is destitute of foliage at the time of flowering, this deciduous habit in a climber for small houses is rather an advantage in this damp climate, especially in narrow streets. This year this Jasmine appears to be flowering with exceptional freedom, some of the branches being completely wreathed with the clear yellow, scentless blossoms. Perhaps of all colours yellow is the most effective in dull weather and in dark places. —B.

Bambusa Veitchi and others.—I quite agree with "T." (p. 459) as to the variegated appearance produced by the withered edges of the leaves of the above Bamboo. At even a short distance the deception is well maintained, but I cannot see that this defect enhances the beauty of an otherwise pretty and useful plant, and consider that, instead of these withered portions of the leaves being beauty spots, they are a sad disfigurement. The other Bamboo mentioned by "T.," B. palmata, as well as many others, such as B. aurea, B. Metake, B. falcata, B. viridi-glaucescens, B. Simonsi, &c., all with green foliage pure and simple, with variations in the depth of the greenery, the width and disposition of the leaves and the habit and stature of the stems and wands, ranging up to 18 feet high, are much nobler objects and far more pleasing to the eye than if daubed with any variegation, be it real or sham.—J. R.

Gustavia pterocarpa.—Gustavia is a tropical American genus belonging to the Myrtle family and comprising several species, which for large stove houses like the Palm house at Kew are valuable both for their fine foliage and their beautiful fragrant flowers. In spite of its relationship to the Myrtles, it is a very different plant indeed from them. The leaves are each 12 inches to 18 inches long by one-third the width, of broadly lanceolate outline, deep green and of leathery texture. The flowers are borne in a short terminal cluster, each flower being 4 inches across, with six rounded, elliptical, concave petals, measuring individually over 1 inch across, and of a soft creamy white. There is a large cluster of yellow-anthered stamens in the centre. The species is a native of the savannahs and forests of tropical America, and was first introduced into Europe by Linden from the banks of the river Mana, in French Guiana. It is an evergreen tree, over 50 feet in height, but it blooms in a small state, as is proved by a plant from 5 feet to 6 feet high which for some weeks past has been flowering in the Palm house at Kew.

Angræcum eburneum.—Taken as a whole, the Angræcums cannot be included amongst the most easily cultivated of Orchids. To this rule A. eburneum is, fortunately, an exception, and it is perhaps the most robust of all the species. Plants imported many years ago give no evidence of enfeebled constitution, and still flower freely and regularly as each winter season comes round. Like most of the Angræcums, this is a native of Madagascar, but it is also found in the Seychelle Islands. The leaves, each about 15 inches long and of a bright, but rather pale green, are remarkably thick and hard in texture and set in two opposite rows on a stout, erect stem. The flower-spikes have the same erect, stiff character as the leaves, and carry numerous flowers. The chief feature of the flower is the large pure white, heart-shaped lip, the sepals and petals being smaller and greenish. The flowers are fragrant, and last from now until February in beauty. A variety known as virens is not so fine, the flowers being smaller and the white of the lip not so pure.

Veitch Memorial medals and prizes.—At a meeting of the trustees, held on the 20th inst., it was resolved to present the Veitch silver medal to the following gentlemen in recognition of their eminent services to scientific horticulture, forestry, and arboriculture, viz., Mons. Henri Vilmorin, of Paris; Professor Sargent, Director of the Arnold Arboretum, Boston, U.S.A.; Mr. F. W. Burbidge, M.A., Curator of the Trinity College Botanic Garden, Dublin; and Mr. Malcolm Dunn, of the Palace Gardens, Dalkeith. It was also resolved to place at the disposal of the National Rose Society two medals and two prizes of £5 each, one to be competed for at the metropolitan show held at the Crystal Palace, and the other at the northern show to be held at Ulverston. Also at the disposal of the National Chrysanthemum Society two medals and two prizes of £5 each, to be competed for at the Jubilee exhibition of the society, and one medal and one prize of £5 to each of the following provincial horticultural societies: Ulster, Dundee, and Derbyshire. All communications respecting the Veitch prizes must be sent to the secretary, A. H. Kent, 40, Doria Road, Fulham, S.W., not to the Chelsea firm.

Protea cynaroides.—Of the numerous representatives of the South African and Australian floras which a generation ago were among the most valued of indoor plants, there is none perhaps whose disappearance in these latter days one has so much reason to regret as the Proteas. Whilst many of them are really beautiful, they are all more or less striking, and differ much from the common run of greenhouse and stove plants. In many gardens—especially those of comparatively recent origin—there is, on account of so much repetition of the same things, a certain monotony in this branch of horticulture which the inclusion of a few old things like this Protea would do much to relieve. P. cynaroides is a South African plant introduced about a century ago. It is from 2 feet to 5 feet high at the time of flowering, and its unbranched stems are clothed with smooth leathery leaves. The flowers are pale flesh-coloured, and are produced (as in the composites) in a large terminal head. This is surrounded by large bracts that are, perhaps, the most ornamental part of the flower-head, which is about 6 inches in diameter. This plant likes a peaty soil and plenty of moisture; any stagnation at the root, however, is fatal, and care should be taken not to overpot. It requires a greenhouse temperature.

Senecio grandifolius.—Perhaps no genus of flowering plants shows greater diversity of habit than the Groundsel family. The Senecios include small herbaceous weeds, handsome greenhouse plants, climbers, and species of almost tree-like dimensions. It is to the latter that S. grandifolius (or S. Ghiesbreghti) belongs. In the temperate house at Kew there is a specimen about 12 feet high with a thick woody stem and a branching top, each branch of which is now crowned with a large corymb of yellow flowers. Regarded either as a fine-foliaged or a flowering plant, this is for a large greenhouse one of the most striking winter bloomers we possess. Its large, coarsely toothed, oblong leaves each 1 foot to 1½ feet long, in themselves render the plant worth growing. During December the flowers (which are really clusters of several corymbs, measuring together over 1 foot across) begin to open. These are of a rich yellow and remain for many weeks in good condition. The species is easily increased by cuttings, and for the first two or three years may be accommodated in a pot. If kept longer, however, it ought to be planted out, as it is a gross feeder and the striking proportions of its leaves and flower-clusters can only be secured by liberal treatment. It is a native of Mexico and requires little more than bare protection from frost.

Maxillaria picta.—This is one of the few species of Maxillaria that still retain a certain amount of popularity, although the genus as a whole is but little grown. It certainly deserves a p ace in any collection, for it is not only one of the most easily cultivated of Orchids, but yields to none in the profusion of its blossoms. The flowers are now at their best, and their sweet, strong perfume renders them particularly acceptable. It is not a showy or brilliantly-coloured Orchid, but is, nevertheless, a very pretty one. The flowers are produced singly on a scape measuring 3 inches to 6 inches in height, and as many as a dozen scapes will spring from a single pseudo-bulb. The sepals and petals are of a soft creamy yellow, spotted with purple, and are very much incurved; the lip is white and also purple spotted. Fully spread out the flower would measure over 2 inches in diameter. The species should be planted in peat and Sphagnum, and may be grown in either pots or baskets. The

latter perhaps are preferable, as they enable the plant to be suspended when in bloom, which on account of the flowers facing downward is an advantage. It is a native of the Organ Mountains, and having been introduced in 1832 is one of the oldest New World Orchids still generally grown. It requires an intermediate temperature, but where that is not available the warmest end of the cool house will do.

Helmholtzia glaberrima. — Although at present a rare and little-known plant, this is certainly a useful one for a winter garden or conservatory. I know of no plant whose flowers remain longer in good condition; indeed, they more than rival some of the Orchids in this respect. In the large temperate house at Kew, where several fine specimens are planted out, it has been in bloom for some months past, and will probably continue to flower all the winter. The species is of Iris-like habit, having two rows of sword-shaped leaves 4 feet to 6 feet high and of a deep green. The flower-scapes are erect, a little shorter than the leaves, the flowers being closely packed towards the top in a branching raceme a foot long. The flowers, which individually are three-quarters of an inch in diameter, are, like the flower-stalks and upper bracts, of a pure milk-white. The species, which belongs to the small and obscure natural order of Philydreæ, is also known as Philydrum glaberrimum. It was introduced by Mr. Bull, of Chelsea, but its native country is not certainly known, as it came over in a package containing plants from Australia and the Pacific Islands. It is most probably a native of the latter. It is a robust and free-rooting plant, and succeeds much better planted out in good loam than when grown in pots. A cool greenhouse temperature suffices for it.—B.

Aphelandra nitens.—Among winter-flowering stove plants there are few which do more to brighten the houses at this season than the Aphelandras. Of several species we have lately noticed at Kew in flower, the one perhaps which more than any other combines the beauties of leaf and blossom is A. nitens. This plant is a near ally of the better-known A. aurantiaca. It is a native of Guayaquil, in New Grenada, and was originally introduced by Messrs. Veitch, of Chelsea, through their collector Pearce. It first flowered with them in 1868. The remarkable leaves, ovate, 6 inches long by 3 inches wide, are of a deep vinous-purple beneath, but on the upper side the colour is a dark bronze, and so glossy as to suggest its having been coated with varnish. The spike is erect, 7 inches to 8 inches high, and terminates the branch on which it is borne. As in all the Aphelandras, it is made four-sided by the shape of the numerous, keeled, closely adpressed bracts which clothe it, and from the axils of which the flowers spring. The corolla is a bright scarlet, 1 inch to 1½ inches in diameter, the upper petal narrow and erect, the three lower ones obovate, the middle one the largest. A group of several plants produces a fine effect in the Begonia house at Kew. The Aphelandras require to be grown in a moist stove, and, on account of their propensity to become leggy, should be frequently started afresh from cuttings. Perhaps the most satisfactory method is to grow them with a single stem, producing one spike of flowers. When in bloom the flowers keep better if the plants are grown in an intermediate temperature.

Reinwardtia tetragyna.—Of the two species of Reinwardtia in cultivation—viz., this and R. trigyna (both also known under the generic name of Linum)—the former is the more valuable as a greenhouse plant. The two species are closely allied, and more than one botanist has expressed the opinion that they are merely forms of one species. The characters to which the specific names refer (that of the number of styles in each flower) do not in every case hold good; instead of there always being four styles in R. tetragyna, as the name implies, there is frequently one more or less than that number. A better distinction is afforded in the corolla, which is larger than that of R. trigyna and of a paler golden yellow; the pointed, toothed leaves are also larger. It is a common plant in certain districts of India, and there attains a height of from 2 feet to 4 feet. It is of bushy habit and suckers freely. The leaves are crowded at the top of the branches, where also the flowers are produced; each flower is 2 inches to 3 inches in diameter, and a succession of them is kept up for a long time. The species likes a warm greenhouse or intermediate temperature, and should be grown in a rich compost of loam, leaf-soil and silver sand. The Reinwardtias, besides their value as greenhouse plants, are interesting as belonging to that class of plants the cross-fertilisation of which is effected, or rather governed, by the different relative lengths of the styles and stamens in different flowers. Primula and Forsythia are also familiar examples where short and long-styled flowers occur. By thus hiding away, as it were, either the male or female organs, cross-fertilisation is almost as surely effected as it is in plants that are unisexual.

Ansellia africana.—With the exception of the Angræcums and other genera of closely allied characters (Aeranthes, &c.), the continent of Africa has not as yet supplied us with any large number of handsome and useful Orchids. Among the few, however, a high place must be accorded this Ansellia, now, unfortunately, a somewhat rare Orchid. Over fifty years ago it was discovered by Mr. John Ansell at Fernando Po growing on the stems of the Oil Palm (Elais guineensis). Dried specimens were sent to Dr. Lindley, who named it after its discoverer, and shortly afterwards it was introduced and flowered, a figure appearing in the *Botanical Register* for 1846. The stems of this Orchid vary in length from 2 feet to 4 feet, and are scarcely the thickness of a man's finger. The leaves, confined to the upper part of the stem, are each 9 inches long, with five prominent ribs. The panicles are terminal and branching, forty to fifty (or, on exceptionally fine specimens, eighty to one hundred) flowers occurring on each. They are not only very handsome, but last at least six weeks in good condition, and this at the dullest midwinter season. Each blossom is 2 inches across, the ovate sepals and petals being pale yellow, but thickly blotched with reddish brown; the lip is yellow and unspotted. Of several varieties, the one discovered in the Upper Nile regions and called nilotica is perhaps the finest, the flowers being larger and of a deeper yellow. Coming from low levels in tropical regions, this species naturally requires warm moist treatment. It should be potted in fibrous peat and a little Sphagnum and given abundance of water when growing. It is a light-loving plant, and the nearer it can be placed to the glass the better.

PHOTOGRAPHIC COMPETITION, 1895.

We thank those who have forwarded photographs for their kind co-operation and the many beautiful things they have sent us, which show a distinct improvement in all ways on those of previous years. The causes of failure are usually over-exposure, getting the distant parts out of tone and all sometimes black, overcrowding of subjects—too much in the photographs, with consequent over-reduction of foliage and flowers.

List of Awards.

Class I.—Country Houses and Flower Gardens.—Miss E. Willmott, Warley Place, Great Warley, Essex.

Extra Prizes.

Mr. Walter Rossiter, 5, Pulteney Street, Bath. Hamswell House; The Terrace, St. Catherine's Court, and Prior Park, Bath; Kingston House; Upper Terrace, Hamswell House.

Mr. G. Fowler-Jones, Quarrybank, Malton, Yorks. Views of Condover Hall, Shrewsbury; Brodie Castle, near Forres, N.B.; Sea Park, Forres, N.B.; and Cawdor Castle.

Mr. W. B. M. Patterson, Nicolls Cottage, Monifieth, near Dundee, N.B. "Cottage," Longforgan, Perthshire; Flower Garden at Bowhill.

Miss J. Allan, Suffolk House, Duppas Hill, Croydon. Two views of a house at Rowfant, Sussex.

Mr. H. Barber, 4, Lime Tree Hill, Matlock Bridge. Stanton Woodhouse; Castle Howard.

Mr. L. G. Linnell, 22, Upper King Street, Leicester. Two views of Turvey Abbey.

Rev. W. A. Woodward, Flax Bowton Rectory, R.S.O., Somerset. Arley Cottage, Staffordshire; Lyntesfield, Somerset.

Class II. — Flowering Plants. — Mr. S. W. Fitzherbert, Lanscombe House, Torquay.

Extra Prizes.

Mr. E. H. Woodall, St. Nicholas' House, Scarborough. Three Vandas, Astericus maritimus, Cycnoches chlorochilon, Lilium testaceum.

Mr. C. Metcalf, Mill House, Halifax. Begonia Rex, Pyrethrum uliginosum, Clematis John Kenneth, Belladonna Lilies in a vase.

Mr. J. Henri, 8, Park Villas, Maidenhead. Dahlia Guiding Star, Fritillaria Meleagris, Pyrethrum Mont Blanc, Hoya carnosa.

Mr. R. Wallace, Colchester. Lilium Parryi, Calochorti, Hemerocallis aurantiaca major.

Mr. W. S. Rogers, 25, Sloane Street, London, S.W. Narcissus Bulbocodium, Chrysanthemum Miss Rose, C. Miss Anderson.

Miss Gaisford, Offington, Worthing. Lagerstrœmia indica, Xanthoceras sorbifolia, Cassia corymbosa.

Lt.-Col. Kelsall, 23, Waltham Terrace, Blackrock, Dublin. Campanula isophylla, Solanum jasminoides, Spiræa flabelliformis.

Mr. Walter Rossiter, 5, Pulteney Street, Bath. Polyanthus and Primrose, Brugmansia suaveolens, Moutan Tree Pæonies.

Mr. W. J. Vasey, Broad Street, Abingdon. Chrysanthemum Etoile de Lyon, Begonia.

Mr. Peter Terras, Markinch, Fife, N.B. Picotees, Rhododendron.

Rev. W. J. Gerrard, The Rectory, Rathangan, Ireland. Group of Sunflowers.

Mrs. E. M. Kendall, Gatley Hill, Cheadle, near Manchester. The "Plantation."

Class III.—Best Garden Fruits.—Mr. J. Henri, 8, Park-villas, Maidenhead.

Extra Prizes.

Mr. J. Miller, 14, Fox-street, Rothwell, Northampton. King of the Damsons, Apple White Summering.

Mrs. T. W. Robinson, The Cedars, Kingswinford, nr. Dudley. Pear Catillac, Pear Beurré Superfin.

Mr. Chas. Seabrooke, The Echoes, Grays, Essex. Pear Durondeau, Pyrus japonica.

Lt.-Col. Kelsall, 23, Waltham-terrace, Blackrock, Dublin. Apple Kentish Fillbasket.

Class IV.—Alpine Flowers and Rock Gardens.—Miss E. Willmott, Warley Place, Great Warley, Essex.

Extra Prize.

Mrs. Selfe Leonard, Hitherbury, Guildford. Primula marginata, Narcissus triandrus, scene in alpine garden, Primula denticulata alba.

Class V.—Lawns and Lawn Trees.—Mr. Magnus Jackson, 62, Princes-street, Perth, N.B.

Extra Prizes.

Lord Annesley, Castlewellan, Co. Down, Ireland. Osmanthus myrtifolius, Aralia spinosa, Cupressus nutkaensis.

Mr. W. M. Smith, Clarence Lodge, St. Luke's, Cork, Ireland. Lawn fernery, a lawn at Castlemartyr, lawn shrubs at Ashbourne.

Miss Knox-Gore, Ardmore, Torquay. Two views of the lawn at Beleek Manor, Dracænas on Lawn.

Class VI.—Herbaceous Borders.—Mrs. Martin, Bournbrook Hall, Birmingham.

Extra Prizes.

Mr. Lawrence G. Linnell, 22, Upper King Street, Leicester. Flower Border at Lovat, Terrace Border at Turvey, Flower Border near Mission House.

Mrs. Deane, Fairfields, Fareham, Hants. A Herbaceous Border.

Class VII.—Water Gardens.

Nothing of merit.

Class VIII.—Best Vegetables.—Mr. F. Parren, 38, Northgate Street, Canterbury.

Extra Prizes.

Mr. J. Miller, 14, Fox Street, Rothwell, Northampton. American Winter Squash, Vegetable Marrow, long, variegated.

Rev. W. J. Gerrard, The Rectory, Rathangan, Ireland. Vegetable Marrow.

Class IX.—Plans of Flower Gardens.

Nothing of merit.

Class X.—Table Decorations.—Mrs. Martin, Bournbrook Hall, Birmingham.

The Royal Gardeners' Orphan Fund.—The usual monthly meeting of the general committee took place at the Horticultural Club on the 20th inst., Mr. William Marshall in the chair. The secretary announced that the sum of £105 15s. 10d. had been received from the trustees of the William Thomson Memorial Fund, they agreeing to the terms as to voting in respect thereof proposed by the committee. The following special donations were announced: Mr. H. J. Jones, Ryecroft Nursery, Lewisham (donations from visitors inspecting Chrysanthemum house), £10 12s. 7d.; The Scottish Horticultural Association (per Mr. R. W. E. Murray), £5; Mr. H. Herbst, Kew Road, Richmond (box), £2 11s. 6d.; Mr. G. W. Cummins, The Grange Gardens, Carshalton, £2 10s.; Mr. W. R. Bloxham, Chesterfield, £2 2s.; The Market Harborough Horticultural Society (sale of flowers at Chrysanthemum show), £1 15s.; Mr. R. Ingleby, Chesterfield, £1 7s. 6d.; Mr. C. Gibson, Morden Park Gardens, Mitcham (box), £1 1s. 7d.: Mr. J. McKerchar, Holloway, £1 1s.; Croydon Chrysanthemum Society (sale of flowers), per Mr. W. P. Beckett, £1 1s.; Messrs. R. W. Proctor and Son, nurserymen, Chesterfield (sale of flowers), £1 1s.; Kingston Gardeners' Association, £1; and the following from boxes: Mr. W. Bates, Twickenham, 18s. 6d.; Mr. F. Miller, Margate, 18s. 2d.; Mr. T. Newbould, Cragg Royal, Leeds, 17s. 6d.; Mr. A. J. Brown, Chertsey, 15s. 6d.; Miss Emily Roger, Farnborough, 13s.; Mr. W. H. Divers, Belvoir Castle Gardens, Grantham, 13s. 7d.; Mr. Jas. Day, Galloway, Garlieston, 12s.; and Messrs. H. Cannell, 10s. A further sum of £500 was ordered to be invested, and a cheque for the quarter's payments to the sixty children upon the fund (amounting to £195) was paid. It being reported that during the coming year nine children would cease to derive benefit from the fund, having reached the maximum age, it was resolved that ten children should be elected at the annual meeting to take place at Anderton's Hotel, Fleet Street, on February 21 next. The *bona fides* of a number of candidates for election were passed, and the proceedings closed with a vote of thanks to the chairman, who thanked the members of the committee for their attendances and support during the year.

The weather in West Herts.—A cold week. On three days the highest shade temperatures ranged only between 34° and 36°, and on the night preceding the 22nd the thermometer exposed on the lawn showed 13° of frost. During the week the temperature of the soil at 2 feet deep has fallen 2°, and at 1 foot deep 3°. At the latter depth the reading is now 2° below the mean for the month. Snow fell on the 20th and 25th, and on the morning of the latter covered the ground to the depth of 1¼ inches. For 131 hours during the week the direction of the wind has been some point between north and east. During the six days ending the 21st no sunshine at all was recorded.—E. M., *Berkhamsted.*



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